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the several systems in effect in three of these states—New York, Pennsylvania, and Pennsylvania—were described in earlier parts of this Report. An article in this present issue describes the plans of Maine, Massachusetts, and Connecticut, and also gives a general summary and comparison of all six systems (p. 220).

In other countries officials focused in different industries, especially in mining industry, as spite of efforts to standardize. The Pennsylvania Department of Labor and Industry has found just the result of a recent study covering the five-year period 1922-1926 that 75 percent of industrial cases of eye industrial origin occurred in the state of Pennsylvania. Much of the blame for this condition lies in fact in the fact that there are Federal regulations designed to control and prevent spread of anthrax among livestock in the country. These are no federal regulations requiring disinfection of materials from countries in which anthrax is prevalent before the material reaches its destination (p. 77).

The *earliest cost* mark from the compensation standpoint in New York State than almost any other type of injury, according to data published by the Industrial Commissioner of that State. It is stated that during the year ending June 30, 1927, there were nearly 5,000 compensated eye injuries in New York State, including 2 cases of total and 10 of total blindness. The compensation paid for eye injuries averaged about \$578 per case, which is more than twice as much as the average for all other types of injury (p. 86).

Exposure to the dusts of various kinds of timber among workers in the working industries carries with it the hazard of nasal trouble, asthma, and dermatitis, according to a study of conditions among woodworkers in Australia. The study showed that a high percentage of the workers had some affection of the nose or throat, this being was an occasional result of exposure, and that persons with skins which are hypersensitive to the dusts can not expect to be free so long as they continue at this employment (p. 81).

The farm laborers of California now share with other employees the benefits of the workmen's compensation law by act of the 1927 legislature. If the farmer does not wish the protection which the law affords, he need now elect not to come under it, whereas formerly the advantages of the act were available to him only if he elected to have the protection (p. 85).

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This Issue in Brief

The work of the United States Bureau of Labor Statistics during recent months is reviewed in an article on page 1. The purpose of this article is not only to give a general idea of the bureau's activities but also to indicate the methods employed in securing, handling, and publishing information, the activities now under way, and certain lines of study which the bureau should be carrying on but is unable to undertake because of lack of resources.

Retirement systems for State employees, apart from those applicable to special classes such as teachers, have been adopted by six States. The general systems in effect in three of these States—New York, New Jersey, and Pennsylvania—were described in earlier issues of the Review. An article in the present issue describes the plans of Maine, Massachusetts, and Connecticut, and also gives a general summary and comparison of all six systems (p. 30).

Anthrax remains a definite hazard in different industries, especially the tanning industry, in spite of efforts to eradicate it. The Pennsylvania Department of Labor and Industry has found as the result of a recent study covering the five-year period 1922-1926 that 7 fatal and 75 nonfatal cases of an industrial origin occurred in the State during that time. Much of the blame for this condition lies in the fact that although there are Federal regulations designed to control and prevent the spread of anthrax among livestock in this country there are no general regulations requiring disinfection of materials from countries in which anthrax is prevalent before the material reaches its destination (p. 77).

Eye injuries cost more from the compensation standpoint in New York State than almost any other type of injury, according to data published by the industrial commissioner of that State. It is stated that during the year ending June 30, 1927, there were nearly 3,000 compensated eye injuries in New York State, including 2 cases of death and 10 of total blindness. The compensation paid for eye injuries averaged about \$578 per case, which is more than twice as much as the average for all other types of injury (p. 86).

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The farm laborers of California now share with other employees the benefits of the workman's compensation law, by act of the 1927 legislature. If the farmer does not want the protection which the law affords, he must now elect not to come under it, whereas formerly the advantages of the act were available to him only if he elected to have the protection (p. 85).

The Coronado Coal Co. litigation, arising out of labor trouble in Arkansas in 1914, was settled out of court on October 17, 1927, by agreement between the parties, after being the cause of two important opinions by the Supreme Court of the United States (p. 107).

That the cooperative movement needs to be made more interesting is the contention of one cooperator of 20 years' standing. The lack of appeal to the imagination, the lack of the dramatic and the picturesque, are in this leader's opinion a weakness that, if not corrected, may eventually prove fatal to the movement. This fact has also been recognized by others and efforts are being made in cooperative organizations here and there throughout the country to humanize cooperation and widen its appeal (p. 101).

British Columbia is the first Canadian Province to adopt the old-age pension plan authorized by the Canadian Parliament in March, 1927. Under this scheme the Province will pay a maximum pension of \$240 per year to such of its residents as have reached the age of 70 and meet the other requirements of the law (p. 88).

An Australian royal commission on child endowment has recently been appointed to consider the subject from the point of view of the Commonwealth as a whole, with special reference to the social and economic effects of such a system. The commission consists of five members, one of whom is a woman (p. 93).

An eight-hour day for men and a seven-hour day for women and minors are established for commercial employees in Salvador under a recent act of the legislative assembly. This act also provides for a weekly rest day, an annual vacation of at least 15 days with pay, and sick leave with pay under certain conditions. The provision of the old law establishing a workers' compulsory saving fund is omitted (p. 110).

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The Work of the United States Bureau of Labor Statistics

THE character and scope of the bureau's work may be best described by a review of its major activities during recent months. This is done, very briefly, in the present article.

Primarily the Bureau of Labor Statistics is a fact-finding agency. Its duty as set forth in the act creating it is to "collect information upon the subject of labor * * * and the means of promoting the material, social, intellectual, and moral prosperity" of the wage earners of this country. The function of the bureau is thus somewhat broader than is commonly understood by the word "statistics." Its field of work not only covers purely statistical data, but also includes other subjects of vital human welfare, such as accident prevention, housing, labor legislation, and social insurance in all its phases.

The activities of the bureau during recent months have covered the collection, compilation, and publication of statistical data regarding wages and hours of labor in various industries, union scales of wages and hours of labor, strikes and lockouts and collective agreements, employment in selected industries, wholesale prices, retail prices, cost of living, productivity of labor in various industries, industrial accidents, industrial safety codes, labor legislation in the various States and decisions of courts affecting labor, building operations in principal cities of the United States, cooperation, industrial hygiene, workmen's compensation, personnel activities for employees, State and municipal pensions, labor turnover, apprenticeship in the building trades, and the preparation and publication of the *Labor Review*. In addition to these more or less permanent lines of work, much of the bureau's time and energy was taken up with special studies, the principal ones being a health survey in the printing trades, published as Bulletin No. 427, a handbook of American trade-unions, published as Bulletin No. 420, and deaths from lead poisoning, published as Bulletin No. 426.

Wages and Hours of Labor, by Industries

FOR many years the principal activity of the Bureau of Labor Statistics was that of gathering and publishing data on wages and hours of labor in the various industries. Formerly this included

three topics—wages, hours of labor, and length of time each plant was in operation during the year. The last-mentioned subject, however, proved very unsatisfactory, since employers would list a plant as in operation if any part of it was in operation, whereas under the present subdivision of industry into various departments of the same plant one department might work continuously while other departments were working on part time or entirely closed down for a considerable period of the year. This feature of the wage work was therefore dropped because it is covered in a more satisfactory manner by the bureau's report on employment in selected industries.

It would be highly desirable, of course, if the bureau's wage studies could cover all important industries at least once a year. Limitation of funds makes this impossible, and the bureau's present policy is to cover the larger industries once every two years. The following brief description of the industrial wage studies made during recent months will indicate the character of the bureau's work along this line.

Boots and Shoes

In collecting wage data for the boot and shoe industry, agents of the bureau during the latter part of 1926 copied wage data for 29,925 males and 22,772 females directly from the pay rolls of 154 representative shoe factories in 14 States. The 52,697 wage earners covered in the 1926 report represent 23.4 per cent of the total number reported in the boot and shoe industry in 1923 by the United States Census of Manufactures.

As a result of this study, average full-time hours per week in the boot and shoe industry were found to be 49; earnings per hour, 52.8 cents; and full-time earnings per week, \$25.87. Between 1913 and 1926 average full-time hours per week decreased 11.1 per cent, average earnings per hour increased 119.1 per cent, and average full-time earnings per week increased 95.4 per cent.

Average full-time hours per week for the industry, or of all employees covered in each State in 1926, ranged from 46.2 in New Jersey to 53.4 in Maine. Average earnings per hour ranged from 39.8 cents in Maine to 61.2 cents in Massachusetts. Average full-time earnings per week ranged from \$21.25 in Maine to \$28.83 in Massachusetts.

The summary figures for the industry were published in the March, 1927, *Labor Review*, and detailed figures in Bulletin No. 450.

Cotton Goods

Data for the cotton-goods manufacturing industry were obtained in 1926 from 151 establishments located in the following 12 States: Alabama, Connecticut, Georgia, Maine, Massachusetts, New Hampshire, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, and Virginia. Data for hours of labor and earnings were obtained for 46,879 males and 36,103 females, or a total of 82,982 wage earners. Schedules from all establishments were obtained for a one-week pay period for all occupations except weavers, for whom a two-week pay period was taken.

Average full-time hours decreased 10.3 per cent between 1913 and 1920. From 1920 to 1926 hours increased 2.9 per cent. The average full-time hours per week for 1926 were 53.3.

Between 1913 and 1920 earnings per hour increased 223.5 per cent and between 1920 and 1926 decreased 31.7 per cent. The average earnings per hour in 1926 were 32.8 cents. From 1913 to 1920 average full-time earnings per week increased 191.8 per cent and from 1920 to 1926 decreased 29.7 per cent. Average full-time weekly earnings for 1926 were \$17.48.

Summary figures of this study were published in the February, 1927, Labor Review, and detailed figures in Bulletin No. 446.

Woolen and Worsted Goods

In the study of wages and hours in the woolen and worsted goods industry in 1926 schedules were obtained from 112 establishments, located in the following 8 States: Connecticut, Maine, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont. Data for hours of labor and earnings were obtained for 22,152 males and 17,818 females, or a total of 39,970 wage earners. Schedules from all establishments were obtained for a one-week pay period for all occupations except weavers, for whom a two-week pay period was taken.

Average full-time hours decreased 13.8 per cent between 1913 and 1920, and increased 2.1 per cent between 1920 and 1926. The average full-time hours per week for 1926 were 49.3.

Between 1913 and 1920 earnings per hour increased 253.7 per cent and between 1920 and 1926 decreased 21.8 per cent. Average earnings per hour were 49.1 cents in 1926. Between 1913 and 1920 average full-time weekly earnings increased 203.6 per cent and between 1920 and 1926 decreased 20.2 per cent. Average full-time weekly earnings were \$24.21 in 1926.

Summaries of this study were published in the February, 1927, Labor Review and detailed figures in Bulletin No. 443.

Men's Clothing

The 1926 data for the men's clothing industry were taken from the June, July, and August pay rolls of the companies visited, and included 17,048 male and 16,611 female wage earners of 198 establishments operating 359 shops. The number of wage earners represents 17 per cent of the wage earners in the industry in the United States and approximately 27 per cent of the wage earners in the industry in the localities covered, according to the 1923 United States Census of Manufactures. The establishments covered in 1926 were located in 10 cities, besides a group of cities and towns in eastern Pennsylvania outside Philadelphia.

Average hourly earnings for the industry as a whole in 1926 were 191.8 per cent higher than in 1913, more than three times that of 1911, 68 per cent higher than in 1919, and 3 per cent higher than in 1922, but were 1.3 per cent lower than in 1924. Average earnings per hour for the industry were 25.6 cents in 1914, 44.6 cents in 1919, 72.8 cents in 1922, 76 cents in 1924, and 75 cents in 1926. The earnings of males and of females as two separate groups were higher in 1926 than in 1924. The paradoxical decrease for the combined earnings of males and of females was due to a larger percentage of females in the industry in 1926 than in 1924. Between 1913 and 1926 full-time

hours decreased 14.3 per cent and full-time weekly earnings increased 151.4 per cent.

Summary figures for the industry were published in the November, 1926, Labor Review and detailed figures were published in Bulletin No. 435.

Iron and Steel

The field work for this study was begun early in 1926, and completed about the middle of June. The 1926 data were obtained from 199 plants, located in 13 States, and included 75,109 wage earners. The plants covered have been grouped into four districts—the "Eastern," "Pittsburgh," "Great Lakes and Middle West," and "Southern." The wage earners covered were approximately 19 per cent of all employees in the industry, according to the United States Census of Manufactures for 1925.

Industry averages of full-time hours were 66.1 in 1913, 64.9 in 1914, 65.5 in 1915, 63.1 in 1920, 63.2 in 1922, 55.2 in 1924, and 54.4 in 1926. Average earnings per hour were 30.1 cents in 1913 and 1914, 29.7 cents in 1915, 74.5 cents in 1920, 51.3 cents in 1922, 64.4 cents in 1924, and 63.7 cents in 1926. Average full-time earnings per week were \$18.89 in 1913, \$18.60 in 1914, \$18.65 in 1915, \$45.65 in 1920, \$31.67 in 1922, \$35.22 in 1924, and \$34.41 in 1926.

Average earnings per hour in 1926, by districts, for laborers, in all departments combined were 37.4 cents in the "Eastern" district, 45.2 cents in the "Pittsburgh" district, 45.8 cents in the "Great Lakes and Middle West" district, and 28.1 cents in the "Southern" district. Average earnings per hour for laborers by departments, all districts combined, ranged from 35.7 cents in puddling mills to 47.5 cents in sheet mills.

Summary figures for the industry were published in the September and October, 1926, and May, 1927, issues of the Labor Review, and detailed figures were published in Bulletin No. 442.

The representative of the bureau who visited Europe in the spring of 1926 found that in the iron and steel industry puddlers in Birmingham, England, earned from \$3.54 to \$3.85 per 8-hour shift, and their helpers \$2.12 to \$2.31. In open-hearth furnaces in Birmingham the first melter earned about \$9.34 per 8-hour shift, the second hand \$6.31, the third hand \$4.67, and the fourth hand \$3.04. Stockers earned \$2.09 per day and common laborers \$1.70. In a sample blast furnace the keeper on an 8-hour day and seven shifts per week earned \$27.83 per week, the charger (top filler) \$22.78, the ore filler \$21.63, the first stove man \$19.44, the furnace laborer \$12.91.

In Germany wages were obtained from several localities. The earnings per 8-hour day for blast-furnace keepers ranged from \$1.58 to \$2.07; stockers had a range of wages for a 10-hour day from \$1.31 to \$1.58, open-hearth melters from \$2.17 to \$2.74, and helpers from \$1.83 to \$2.45 per day.

Bituminous-coal Mining

Wage data for the 1926 study of the bituminous-coal mining industry covered pay rolls of 556 mines in 11 of the most important coal-producing States and comprised a total of 148,155 wage earners, or 25 per cent of the 588,493 mine workers reported in bituminous-coal mining in 1925 by the United States Bureau of Mines.

The three basic occupations in bituminous-coal mining are those of hand or pick miners, machine miners (cutters), and hand loaders. They represent approximately 63 per cent of all wage earners in the industry. Average hours worked per half month based on time at the face or working place (including time for lunch) of loaders was 66.2 in 1922, 63.3 in 1924, and 73.7 in 1926; of hand or pick miners, 71 in 1922, 65.6 in 1924, and 77 in 1926; of machine miners, 75.4 in 1922, 72.9 in 1924, and 86 in 1926. Average earnings per hour based on time at the face (including time for lunch) of loaders was 90.2 cents in 1922, 81.1 cents in 1924, and 77.9 cents in 1926; of hand or pick miners, 84 cents in 1922, 80.9 cents in 1924, and 78.3 cents in 1926; of machine miners, \$1.274 in 1922, \$1.163 in 1924, and \$1.195 in 1926.

Summary figures were published in the July, 1927, Labor Review and detailed figures in Bulletin No. 454.

Motor Vehicles

The field work for this study of wages and hours of labor in the motor-vehicle industry was taken up near the middle of October, 1925. The bulk of the data are for a pay period in October, November, or December. The 1925 data covered a total of 140,930 male and 3,432 female wage earners in 99 plants or establishments in 8 States. The number of wage earners covered represents 35.6 per cent of the total number reported in the 1923 Census of Manufactures.

Average full-time hours per week for the industry increased from 50.1 in 1922 to 50.3 in 1925. Average earnings per hour increased from 65.7 cents in 1922 to 72.3 cents in 1925. Average full-time earnings per week increased from \$32.92 in 1922 to \$36.37 in 1925.

Summary figures were published in the August, 1926, Labor Review, and detailed figures in Bulletin No. 438.

Hosiery and Underwear

Between October 1 and December 31, 1926, wage data were collected by the agents of the bureau from the pay rolls and other records of 105 representative establishments in the hosiery industry in 18 States and 85 representative establishments in the underwear industry in 15 States. Data were collected for 10,250 males and 20,296 females, or a total of 30,546 in hosiery, and for 2,860 males and 12,188 females, or a total of 15,048 in underwear.

The 1926 averages in the hosiery industry were: Full-time hours per week, 51.9; earnings per hour, 47.2 cents; and full-time earnings per week, \$24.50. Averages for the underwear industry were: Full-time hours per week, 50.3; average earnings per hour, 37.8 cents; full-time earnings per week, \$19.01. The averages for both industries combined were: Full-time hours per week, 51.3; earnings per hour, 44.3 cents; full-time earnings per week, \$22.73.

Full-time hours per week for both industries combined decreased from an index of 100 in 1913 to 92.4 in 1926. Average earnings per hour increased from an index of 100 in 1913 to 266.6 in 1926. Average full-time earnings per week increased from an index of 100 in 1913 to an index of 245.6 in 1926.

Summary figures were published in the May, 1927, Labor Review and detailed figures in Bulletin No. 452.

Pottery

To supplement the study of wages, hours, and productivity in the pottery industry made in 1925, the bureau sent a representative to Europe in the spring of 1926 to collect such data as could be obtained in Great Britain and in Germany for comparison with American conditions. Government statistical offices, employers, and trade-union officials were visited.

In the earthenware potteries of England it was found that male plate makers earned an average of 37 cents per hour; females, 26.4 cents. Male casters had an average earning of 33 cents per hour and females 17.7 cents. Pressmen in the slip house earned 34.5 cents per hour; female lithographers, 15.2 cents per hour. The prevailing working time in the potteries was 8½ hours per day and 47 hours per week. A plate-making crew of three (plate maker, mold runner, and finisher) made from 120 to 192 plates per hour.

Occupational wage figures for the pottery industry were not found available in Germany, owing in part to the German method of classing employees in skilled or unskilled groups rather than by occupations. Skilled male pieceworkers' earnings ranged from 31.7 cents per hour in Berlin to 18.6 cents in small country places. Unskilled male time-workers' earnings ranged from 17.9 cents per hour in Berlin to 13.1 cents in small country localities. These averages cover both earthenware and porcelain potteries. The prevailing hours were 8 per day and 48 per week.

Wage Studies in Progress

Wage studies for the following industries are now in progress: Slaughtering and meat packing; foundries and machine shops; electrical appliances and equipment for the home and shop; aluminum, copper, and brass ware; cotton-oil mills, compresses, and gins. These studies, as in the case of all other wage studies, are being made by special agents of the bureau, who themselves transcribe all the data derived from the records of the establishments visited.

Union Scales of Wages and Hours of Labor

ANOTHER important wage survey of the Bureau of Labor Statistics covers union scales of wages and hours of labor in selected trades and occupations. This survey is made annually and is confined to the unions whose members work at time rates and which have definite agreements with their employers. In this work the bureau has secured the cooperation of several of the State bureaus of labor, which obtain the information from the trade-unions in their States and furnish the United States Bureau of Labor Statistics with copies of reports from such cities and such unions as are contained in the bureau's list. Information on union wages and hours of labor in selected trades and occupations has been collected back to 1907. Data are obtained as of May 15 each year by personal visits of special agents of the bureau in the case of 50 cities and by cooperation of

Massachusetts, Pennsylvania, and Ohio State bureaus for the other 16 cities located within those States.

The report for 1927 covered bakers, building trades, chauffeurs and teamsters and drivers, granite and stone cutters, laundry workers, linemen, longshoremen, book and job and newspaper printing trades, and street-railway motormen and conductors. Trades in the above groups are shown for 66 cities and include a total of 835,924 trade-union members for whom minimum wages and maximum hours under agreements are shown.

The average hourly wage rate for 1927 of all trades covered, except street-railway motormen and conductors, was \$1.19; for motormen and conductors it was \$0.682. The average hours for all groups except street-railway motormen and conductors were 45.2. No hours were shown in the case of motormen and conductors because of the irregular shifts worked.

The general index number for all trades combined showed that hourly rates of wages for 1927 were 159.5 per cent higher than in 1913, while hours per week were 7.3 per cent lower than in 1913.

A bulletin is published each year including all trades and occupations covered in the survey. In addition wages and hours for 20 of the principal trades in 40 localities are published in the September issue of the Labor Review and a summary for the year in the November issue.

Strikes and Lockouts and Collective Agreements

CLOSELY connected with the wage studies of the bureau has been the work of the division which reports on strikes and lockouts and the division reporting on collective agreements and arbitration awards.

Strikes and Lockouts

Since 1916 the Bureau of Labor Statistics has been compiling statistics of industrial disputes and publishing condensed statements thereof in the Labor Review. Prior to 1926 such publication had been made quarterly and annually, but beginning with November, 1926, a change was made to a monthly basis to conform with the bureau's desire to publish its statistics monthly whenever possible.

There is no legislation in the United States requiring the reporting of strikes and lockouts to the Federal Government, and the bureau has no machinery for the prompt and full recording of such disputes. For the initial reports of disputes it must rely largely upon newspapers and other publications supplemented by information supplied by the Conciliation Service of the Department of Labor. As a result the bureau's records can not be regarded as entirely complete. It is believed, however, that all the larger and more important strikes are duly recorded.

Until recently, in following up the preliminary reports of disputes, reliance was placed chiefly upon correspondence, all parties to a controversy being written to and requested to fill out forms covering the principal items of information desired. This system was only partially successful, and beginning in the latter part of 1927, the policy was adopted of using representatives of the department to check up and complete the detailed reports desired. By this means

it is expected that in future the bureau's monthly reports on strikes and lockouts will be greatly improved.

As shown by the data published by the bureau, the number of industrial disputes in the United States for the past few years has been at a low level. Thus in 1926 the number of disputes in which the number of persons involved was reported was only 783, with 329,592 workers affected, or a smaller number than in any other year since the beginning of the bureau's reports in 1916. During 1927 the bituminous-coal strike greatly increased the number of workers affected by industrial disputes, but aside from this the number of disputes during 1927 has continued at a low level.

Collective Agreements and Arbitration Awards

The bureau makes every effort to obtain copies of new collective agreements and arbitration awards. It has, however, no special equipment for this purpose and must rely largely on the labor unions and employers to furnish these documents. A careful search of the newspapers, trade-union journals, and labor papers is made in order to keep in touch with developments along this line.

After the agreements have been received, study is made of their contents and any new features or peculiarities or changes in conditions, or any items deemed for any reason to be worthy of mention are noted and printed in the Labor Review. Similarly, changes in wages or hours are also stated and printed monthly in the Review.

At the end of the year representative agreements made during the year are analyzed for publication in bulletin form. Bulletin No. 448 dealt with the year 1926.

Arbitration awards are similarly treated. Significant ones are printed, in whole or in part, in the Review, as are also decisions of impartial chairmen in various branches of the clothing industry in cities where impartial machinery has been set up, and decisions of the train service boards of adjustment.

Employment in Selected Manufacturing Industries

THE Bureau of Labor Statistics publishes monthly reports on employment in selected manufacturing industries, based on returns obtained by correspondence from nearly 11,000 establishments. These reports show the number of people employed and the total amount of their earnings in one week in 54 of the most important manufacturing industries. Additional facts are given as to changes in rates of wages, changes in per capita earnings, and changes in operating time, and the percentage of full-time and part-time operation for the plants as a whole.

Approximately three-fourths of the 11,000 establishments make reports directly to the bureau each month; the remaining establishments make reports to the bureau of labor of the State in which they are located, these bureaus in turn furnishing the Bureau of Labor Statistics with a copy of the data, thereby saving a duplication of reports on the part of the establishments. At present this co-operative arrangement is in force with seven States—California, Illinois, Maryland, Massachusetts, New Jersey, New York, and Wisconsin.

Index numbers, which show relatively the variations in number of persons employed and in pay-roll totals in each industry surveyed, as well as for all industries combined, are published by the bureau, together with charts, which show the course of employment over a series of months. These graphic charts make easily possible a comparison of industrial activities in the current month with conditions in previous months, and especially with conditions in the same month of the preceding year, the last-named comparison being a most reliable measure of general industrial conditions. That is, while variations in employment and pay-roll totals from month to month may truly indicate increases or depressions in business, the relative monthly levels are most sensitive to seasonal variations and hence may be wrongly interpreted, but when a comparison is made over a year's interval the variation in levels is of the utmost significance.

The average index of employment in the first nine months of 1927 has been uniformly lower than the corresponding indexes for 1926. Pay-roll totals also have been lower in 1927 than in 1926, excepting the month of May, when the level was the same in 1927 as in 1926.

The collection of monthly employment data of this character makes possible also a comparison of industrial conditions in the different sections of the United States and enables a study of the growth or decline of an industry in one section as compared with another section. For example, a study of the cotton-goods industry in the New England States, the Middle Atlantic States, and the Southern States has just been published, covering the period from January, 1923, to May, 1927, which graphically pictures the remarkable changes which recently have taken place in the location of this industry. Similar studies are made from time to time, as variations in an industry become apparent and as means are available.

In handling the monthly data on employment every effort is made to secure prompt compilation and publication of the results. Under the system now employed, a mimeographed summary statement of the data for each month is released on or about the 15th of the succeeding month and a printed pamphlet containing all details is issued about a week later.

In addition to the compilation of data showing the volume of employment and the amount of pay roll the bureau shows (a) the percentage of establishments operating full time and part time and the average percentage of full time operated, and (b) the percentage of establishments operating with full force and part force, and the average per cent of full force employed. All of these items are shown by industries and by groups of industries.

Wholesale Prices

WHOLESALE prices in representative markets of the country are collected each month by the bureau for 550 commodities. In some instances prices for a particular grade or quality of an article of special importance are obtained in several different localities. In other instances prices for several different grades of an important article are obtained in the same locality.

A majority of the price quotations are taken from standard trade journals. About one-third are furnished directly by manufacturers

or sales agents. In a number of instances prices are furnished by officials of boards of trade and similar bodies. As far as possible the quotations for the various commodities are secured in their primary markets. For example, the prices quoted for livestock and most animal products, as well as for most of the grains, are for Chicago; flour prices are mainly for Kansas City, Minneapolis, and St. Louis; pig iron and steel for Pittsburgh; and so on.

The information collected by the bureau is published annually in bulletin form, each bulletin containing monthly data for the last two years and yearly data back to 1890. Detailed information is also published monthly in pamphlet form and in the Labor Review.

During the current year the bureau decided to revise its index numbers of wholesale prices in order to provide a better barometer of price changes.

This revision was completed and made public in September, 1927. It consists of (1) a change in the price base from the pre-war year 1913 to the last completed year, 1926, and (2) the substitution of more recent data for the 1919 weighting data used in the construction of the index numbers for groups of commodities. In addition, a considerable number of articles of great importance, such as automobiles and tires, agricultural implements, prepared fertilizers, by-product coke, rayon, and box board, have been included in the revised figures, while several articles no longer important, as clay worsted and middlesex suiting, and Bessemer steel billets and rails, have been dropped.

The shift in the price base from 1913 to 1926 has been made in order that the latest and most reliable information may be utilized as the standard for measuring price changes. Also it has become increasingly apparent that the year 1913 is now too remote to furnish longer a satisfactory base for comparing prices.

For much the same reasons data for the years 1923 to 1925 have been substituted for the 1919 figures used in weighting the prices included in the index numbers. Where trustworthy information for the three years 1923, 1924, and 1925 could be procured, as in the case of agricultural products, the average for these years was used as the weight. For manufactured products the census reports of 1923 and 1925 were used. In all cases the most recent and dependable information obtainable has been employed in constructing the weighted index numbers for the various groups of commodities. In addition, a few changes of minor importance have been made in the arrangement and composition of the groups. The revised index includes 550 commodities as compared with 404 formerly used.

The bureau's indexes show that wholesale prices have been appreciably lower in 1927 as compared with 1926, but with a distinct upward trend beginning in July and continuing as late as October.

Retail Prices

FOR a number of years the bureau has collected and published data relating to retail prices of food. Prices are now secured for 43 articles in 51 cities. The information is furnished by approximately 1,500 retail dealers, the number ranging from 10 to 15 in the smaller cities to as high as 30 in several of the larger cities. Furthermore, reports are now received from about 240 bakeries, 225 retail coal

dealers, 80 gas companies, and 70 electric-light companies. This information is furnished voluntarily on blanks supplied by the bureau.

In the case of food, the retail dealers who furnish the information are selected through personal visits of agents of the bureau, the dealers being largely owners of neighborhood and chain stores patronized by workingmen's families. After the agent has selected a store, arrangements are made with the merchant to forward to the bureau a statement of prices of the various commodities on the 15th of each month thereafter. Return visits to the various firms are made by agents whenever it becomes necessary to make personal inquiries concerning the price quotations or to secure new reporters in place of firms going out of business or who persistently fail to send in their reports.

Coal dealers in each city are requested to quote prices on the kind of coal usually sold for household use. The prices relate to coal delivered to consumers, but do not include charges for storing the coal in cellars or coal bins when extra handling is necessary. Gas and electricity prices are collected twice a year, viz, June 15 and December 15. Companies are visited by agents of the bureau when questions arise that can be answered only by a personal interview with the official supplying the information. Coal, gas, and electricity prices are secured in each of the 51 cities for which food prices are collected.

The information relating to retail prices is published annually in a bulletin, summaries back to 1890 being given in each report. Since July, 1915, much information has also been included in the Labor Review. The prices are published in the form both of averages and of index numbers. The index numbers for all food articles combined are made from weighted aggregates of actual money prices in order that each article may have an influence equal to its relative importance in consumption in the average family, the year 1913 being used as the price base or 100 per cent.

The retail food index number is used frequently in wage discussions, food being estimated at about 38 per cent of the entire family expenditure and data being available each month, while cost-of-living figures as a whole are collected only twice a year.

During the first half of 1927 retail food prices were somewhat higher than in the corresponding period of 1926, but beginning in June and extending as late as October retail food prices have been lower than in the corresponding months of 1926.

Cost of Living

SINCE 1918 the bureau has been publishing "Changes in the cost of living." However, when the work was begun, prices were secured in a number of cities back to December, 1914, consequently the tables bearing on this subject start from that date.

There are two essential features in this work. One is to find the differences from time to time in the prices or cost of the several articles entering into the usual family expenditures, and the other is so to "weight" the price of each article or group of articles that it will have its proper effect on the cost of living as a whole. It is evident that the price of an overcoat will have greater weight in the family budget than the price of a pair of shoes or of a hat, but an

overcoat will usually last several years, while most men purchase shoes and hats each year, so that the latter items may cost as much or more in the total than the former item.

Having provided a system of weighting, the next step is to secure information relative to the prices of the various items or articles entering into the usual family budget and their changes from time to time. The number of articles is so great that it is impracticable to get prices at frequent intervals on all the articles the average family buys, so the bureau has selected a number of the more important and representative articles of each of the six groups and secures prices on these articles. It is believed that the articles so selected fairly represent all the articles in the respective groups, and that changes in the cost of living, based on changes in the cost of these articles, are very close to the actual changes experienced by the average family. The manner of securing and computing prices of food, coal, gas, and electricity is described under the section devoted to "Retail prices." All other prices are secured periodically by special agents of the bureau, who visit merchants, dealers, and agents and get data directly from records.

In selecting stores and establishments from which to secure prices every effort is made to get representative firms in various sections of the city which are patronized by workingmen's families.

Quotations for each article are secured from four stores or establishments, with a few exceptions, such as street-car fares, for instance, where in the nature of things not so many quotations can be obtained.

Data on rents are secured from 400 to 2,200 houses and apartments in each city, depending on the population. These houses are such as are occupied by representative workingmen's families.

Prices of clothing, furniture, and the like are secured through the personal visits of agents, rather than by correspondence, for two reasons. The articles in these groups are not standardized to the extent that articles of food are; neither can they be described so definitely as to be readily identified at all times. Besides this, the grade or quality as well as the style of clothing, furniture, and the like is constantly changing, and substitutions frequently have to be made. It is absolutely essential in order to secure correct results when such substitutions or changes are made that the article substituted must be as nearly as possible of the same quality or grade as the original article. The experience of the bureau is that it is very difficult, if not impossible, to obtain satisfactory results in this work by correspondence. It requires the personal investigation and careful inquiry of a trained agent who thoroughly understands the work to secure the best results. Whenever substitutions have to be made prices are secured on the articles substituted for the previous price period as well as for the present, so that the figures will always be comparable.

The following table gives index numbers with 1913 as the base, or 100, showing changes in the total cost of living in the United States from 1913 to June, 1927:

INDEX NUMBERS SHOWING CHANGES IN COST OF LIVING IN THE UNITED STATES,
1913 TO JUNE, 1927

Date	Index numbers	Date	Index numbers	Date	Index numbers
Average, 1913.....	100.0	May, 1921.....	180.4	December, 1923.....	173.2
December, 1914.....	103.0	September, 1921.....	177.3	March, 1924.....	170.4
December, 1915.....	105.1	December, 1921.....	174.3	June, 1924.....	169.1
December, 1916.....	118.3	March, 1922.....	166.9	September, 1924.....	170.6
December, 1917.....	142.4	June, 1922.....	166.6	December, 1924.....	172.5
December, 1918.....	174.4	September, 1922.....	166.3	June, 1925.....	173.5
June, 1919.....	177.3	December, 1922.....	169.5	December, 1925.....	177.9
December, 1919.....	199.3	March, 1923.....	168.8	June, 1926.....	174.8
June, 1920.....	216.5	June, 1923.....	169.7	December, 1926.....	175.6
December, 1920.....	200.4	September, 1923.....	172.1	June, 1927.....	173.4

Need for a New Family Budgetary Survey

From the above it will be noted that the value of the bureau's cost-of-living figures depends very largely upon the accuracy of the measurement of the standard of living as derived from the family budget survey. The family budgetary survey upon which the bureau is depending for its weights or, in other words, for the amount of each article consumed by the average workingman's family, was made in 1918-19 and is therefore practically 10 years old. That survey covered 12,096 families. These families were fairly well scattered, but the distribution was based upon the fact that the information was primarily wanted for the United States Shipping Board; hence shipbuilding centers received possibly more consideration than they would in a budgetary survey intended to furnish a cross-section view of the entire industrial population of the United States.

There can be little doubt in the mind of anyone who has had even casual contact with the workers of the United States that their standard of living has greatly improved since 1918. It has frequently been stated that the per capita consumption of bread and flour is lower than it was several years ago, but the answer to this is that as people learn the meaning of a balanced ration more vegetables and fruits and less bread are used. The same is true of meat. As a nation we have been accused of being too heavy meat eaters; nevertheless, as education advances, this corrects itself; and the decrease in consumption of both of these articles of food does not mean a lowering of standards, but probably means a better or more intelligent standard. Also the 1918 survey did not cover installment buying. Just what effect installment buying of automobiles, radios, household electrical appliances, and the like may be having upon the purchases of the more generally accepted regular articles of household need, even food, it is impossible to tell.

It must be clear that if there has been a redistribution of expenditures along lines other than those found to be true in 1918, then the collection of present prices on articles consumed in 1918 and the application of these prices to the volume and distribution of consumption as found in 1918 do not give a 1927 cost-of-living picture. It is a very serious question as to whether or not the bureau should continue to collect up-to-date prices to be applied to a 1918 quantity distribution of family purchases and call this an up-to-date cost-of-living study.

Another use that has been recently made of the bureau's family consumption figures has shown that those figures enable the manufacturers to determine very closely the volume of a given product which the American market would absorb, and also that they give local merchants a very definite idea as to the quantity of any designated article of household or family use that can be sold in a given city in a year.

Family budget surveys are too expensive to be done from the bureau's ordinary funds, and a special appropriation for this purpose is highly desirable.

The new survey, if authorized, should cover a better selection of industrial centers according to the proportion of our working population engaged in the various industries. A larger number of smaller cities should be included. The survey should include a larger number of families and the income limit of families to be budgeted should be increased. More stress should be laid upon quantity consumption per family and per individual and a more careful study of installment-plan purchases should be made.

Productivity of Labor

IN THE earlier years of its existence the Bureau of Labor Statistics devoted a very large proportion of its time to the collection of wages, or what the worker is paid for his time. This grew from year to year until the bureau has now a very large fund of wage information covering a very large group of workers. Subsequently much of the bureau's time and effort were given to the subjects of cost of living, food prices, and so on, to determine what it costs the worker to live, and this in relation to the wages he receives. Under the present administration it has been felt that the other point of the triangle should be ascertained to make the picture complete; that is to say, what the worker does for the wages he receives. The bureau has ascertained what the worker receives for his labor and what he gets for the money received when he in turn spends it to maintain himself, but no attention has been paid to what the employer gets for the money he pays in wages. While this phase of the industrial problem has received some attention since the beginning of the present administration of the bureau, it is only within the past fiscal year that thoroughly worked-out plans have been put into operation.

The measurement of productivity is a problem entirely distinct from that of assigning the causes of any increases or decreases that may have taken place over a period of time. The increased output per man-hour in a given industry may have been due to more skillful and efficient labor, to new inventions, improved machinery, superior management, or any one of a number of factors; but the bureau in these general summaries makes no attempt to determine the relative importance of these factors. Labor time is used as the unit for measuring productivity, but this does not imply that the increased output is due to the efforts of labor alone, or that it is due to the efforts of labor at all.

The productivity studies of the bureau have been along two lines: (1) To develop, from existing data, indexes of productivity showing

for various important industries the changes in the output per man-hour over a period of years, and (2) special field studies of selected industries. A study of the glass industry has been completed, as has also a study of one branch of the cotton-manufacturing industry. Similar field studies of the iron and steel industry, the printing trades, and longshore work are now under way.

Indexes of Labor Productivity

The primary problem in the compilation of indexes of labor productivity is that of harmonizing the statistics of production and of employment which are already being gathered by governmental and other agencies. These statistics have been compiled for other purposes than measurement of productivity, and they can not always be readily combined to show output per man-hour; but when the importance and practicability of productivity measurement are clearly understood, it should be possible to gather employment and production figures in the important industries of the country in such a way that the changes in output per man per hour can be clearly and accurately shown from year to year. The timeliness of this work of the bureau is emphasized by the rapid growth and widespread use of such measurement by individual concerns for their own purposes.

In approaching this problem the bureau has been interested primarily in general summaries of the man-hour productivity in the industry as a whole rather than sample data for important plants. The loss in accuracy of the general summary is more than counterbalanced by the comprehensiveness of the material and the significance of the resulting indexes. Thus far the bureau has been able to construct productivity indexes for 11 industries. These have shown increases in output per man-hour from 1914 to 1925, as follows: Iron and steel, 59 per cent; boots and shoes, 6 per cent; leather tanning, 26 per cent; slaughtering and meat packing, 27 per cent; petroleum refining, 83 per cent; paper and pulp manufacturing, 34 per cent; cement manufacturing, 61 per cent; automobiles, 172 per cent; rubber tires, 211 per cent; flour milling, 40 per cent; and sugar refining, 28 per cent. For the most part the period covered is that from 1914 to 1925, though occasionally it has been possible to make indexes further back, to 1909 or earlier. In no industry has there failed to be an advance in productivity between 1914 and 1925, while in some the output per man-hour has been doubled and even tripled in the last 10 years.

The general productivity studies above described have relied chiefly on data already compiled and drawn from numerous sources. While sufficiently accurate for general purposes, the indexes so derived must be revised and amplified by direct field investigation before thoroughness and exactness are attained. Further, the bare measurement of productivity must be supplemented by analysis of the reasons for changes which are discovered in order that the statistical results may not be misused by those economic groups desiring to claim the larger share of the credit for greater efficiency. The bureau is therefore ascertaining and measuring the causes of increased output per man-hour by means of these special field studies.

Labor Productivity in the Glass Industry

A very comprehensive study of the glass industry, with special reference to labor productivity, has been published as Bulletin No. 441. The importance and general results of this study were set forth as follows in a summary published in the April, 1927, Labor Review:

In no other industry has the introduction of machinery had a more dramatic effect upon labor productivity than in the glass industry. Thus, to take an extreme example, in the blowing of 4-ounce prescription bottles the average output per man is more than forty-one times as great with the automatic machine as with the hand processes which were in general use up to less than 20 years ago. This means a great reduction in the number of workers necessary to turn out a given quantity of product. It also means a great change in the character of the labor force. Instead of a group of very highly skilled glass blowers, assisted by a group of unskilled "boys," the automatic machine employs mechanics and machine operators, with little or no demand for child labor.

These revolutionary changes in the glass industry have taken place within a period of 25 years. The advent of the twentieth century found the glass industry in the United States still in the stage of hand production. With the exception of a few experimental semiautomatic machines used for the making of vaseline jars, the process of blowing bottles and other glassware was essentially the same as that used in Egypt some 3,500 years ago. In 1925 hand production had all but disappeared from the field. Its place was taken first by the semiautomatic and more recently by the automatic machines.

Labor Productivity in Cotton Manufacturing

The results of an investigation of labor productivity in an American cotton mill were published in the Labor Review for September, 1926. Comparisons were made of production per man-hour and of labor costs during selected periods—1911, 1916, and 1925. The tabulations showed that 10.08 pounds of yarn were manufactured per man-hour in the 1911 period; that in the 1916 period the production had increased 4.9 per cent to 10.57 pounds per man-hour, while in the 1925 period it had advanced 9.7 per cent over the 1916 production to 11.59 pounds per man-hour. Cloth production from the yarn also showed an increase. In the 1911 period the output was 7.95 pounds per man-hour, but it rose to 8.26 pounds per man-hour in the 1916 period, an increase of 3.9 per cent, and to 10.31 pounds in the 1925 period, a gain over 1916 of 24.8 per cent. The increases in both departments were largely due to installation or substitution of more modern equipment or labor-saving devices, though also effected by more efficient management and better plant organization. Finishing of the cloth showed an increase from 56.62 pounds per man-hour in 1911 to 74.63 pounds in 1916, or 31.8 per cent, principally due to reduction in number of workers, but showed a drop to 63.40 pounds per man-hour in 1925, a decrease from 1916 of 15 per cent, through employment of additional help to insure better quality of cloth.

Labor Productivity in the Iron and Steel Industry

In the iron and steel industry the bureau's representatives are now engaged in gathering data on productivity from blast-furnace, open-hearth, and Bessemer plants. This study is expected also to throw light on the development of the industry and on the comparative status of the various producing districts and classes of plants. In its well-established accident statistics the bureau has obtained for

many years information showing the total man-hours worked, by years, in the principal operating departments of the industry. In the present study effort is made to clarify the man-hour data and to obtain production and operating data in such a way that reliable indexes of productivity can be constructed and the changes attributed to major specific causes.

Labor Productivity in the Printing Trades

A study of labor productivity in the printing trades now being carried on seeks to obtain specific information on changes in methods, tools, and machinery, so as to compare present and past output for selected occupations, reduced to man-hour basis, as well as conditions of manufacture and the labor cost.

In the beginning it was intended to include all the different operations belonging to the industry, but when it was realized that the varied conditions would create conflicting comparisons, and that such a complete survey would consume too much time, the study was eventually confined to the three principal mechanical processes in newspaper printing—composition, stereotyping, and presswork. Several cities were visited and information obtained direct from the pay rolls and production records of establishments, together with required data on equipment and working customs. Manufacturers of printing machinery were also interviewed for information on the various machines or attachments built by them, improvements, capacity, and other records pertaining to the survey.

Labor Productivity in Longshore Work

A study of the productivity of labor in longshore work—that is to say, in the loading and unloading of vessels—was started in the early part of 1927. In recent years many new methods and many new mechanical devices have been introduced in this work, and the present study should develop valuable information as to the relative efficiency of hand and machine methods as well as to the changes in labor productivity which have occurred.

Labor Productivity in Woolen and Worsted Goods Manufacturing

In the late summer of 1927 the assistant commissioner made a visit to Europe to obtain data regarding productivity in the woolen and worsted industries. The information obtained has not yet been put into final shape.

Industrial Accidents

THE industrial accident division of the bureau had its origin in a special investigation authorized by resolution of the United States Senate in 1910. That investigation covered hours, wages, labor conditions, and accidents in the iron and steel industry. The inquiry into accidents in the iron and steel industry has been continued annually. Its purpose, as well as the purpose of all accident inquiries carried on by the bureau, has been as follows:

1. To set up the average experience as a standard by which a given section of the industry might determine its relative standing in the matter of accident occurrence.

2. To determine by year-to-year presentation whether the trend of accidents is in the direction of increase or decrease.

3. To show by suitable examples the possibilities of accident prevention when the problem is attacked with intelligence and vigor.

4. To afford illustrative material for use in the prosecution of accident-prevention campaigns.

The data used in the accident bulletins of the bureau have been derived from two sources—namely, from the concerns involved and from the records of State compensation commissions.

In the case of the iron and steel industry the first data were assembled before the enactment of any compensation laws. Having begun by inquiry directed to the individual concerns it has been convenient to continue that procedure to the present time.

For two years past the bureau has been gathering information regarding the experience of the State jurisdictions dealing with industrial accidents in order to determine accident rates for industrial groups other than iron and steel. For 1925 reports were secured regarding 24 industries located in 11 States, operating 1,272 plants and employing the equivalent of 555,988 full-year workers. This information in part was furnished by the State bureaus and in part was secured by a representative of the bureau in cooperation with the State officials.

It is, of course, impossible to determine exactly what influence the placing on record of the facts regarding accidents in the iron and steel industry may have had in the remarkable decline in frequency and severity which has occurred in recent years. That it was an important factor there can be no doubt.

What has taken place in the matter of accident reduction is illustrated by a few figures from a table printed in the Labor Review for October, 1927. This table covers a section of the iron and steel industry in which accident prevention has been long continued and strenuous. From 1913 to 1926 the frequency rate declined, for the entire group, from 60.3 to 6.8. In the operation of machinery the decline was from 7.3 to 1.5. Similar declines might be noted for other causes of injury. When the accidents are classified according to the departments of the industry the same trend is observed.

During the current year a compilation of the accident experience of the iron and steel industry to the end of 1926 was published in the Labor Review (October, 1927) and also a compilation showing the accident experience in various American industries in 1925 and 1926 (November, 1927). In addition there was published a bulletin which brought together accident statistics for the United States over a period, so far as such statistics were available. (Bul. No. 425.)

The most serious need of this division of the bureau at the present time is to be able to make more extended and more prompt contacts with the State bureaus. It is highly desirable to make personal visits to these bureaus. By so doing it will be possible to secure a greater degree of cooperation and to acquaint them with the plans of the bureau in a more definite way.

Industrial Safety Codes

THE bureau's activities in cooperation with the American Engineering Standards Committee in the development of industrial safety codes are closely connected with the work of the industrial accident division of this bureau.

The activity of the committee which most directly affects the work of the bureau is the revision of its Bulletin No. 276, Standardization of Industrial Accident Statistics. This bulletin, originally prepared by the committee on statistics and compensation insurance costs of the International Association of Industrial Accident Boards and Commissions, with the cooperation of the Bureau of Labor Statistics, is now 10 years old and seriously in need of revision. By agreement of the International Association of Industrial Accident Boards and Commissions, the industrial accident prevention conference held in Washington, D. C., July 14-16, 1926, and the Bureau of Labor Statistics, the matter of such revision was proposed to the American Engineering Standards Committee and the revision is now in progress under the procedure of that committee.

In its general work in cooperation with the American Engineering Standards Committee the bureau is the authorized representative of the Department of Labor on its executive and main committees, and as such is delegated to furnish representatives on all sectional committees having to do with industrial safety codes from the ranks of the workers actually employed to use the tools and machines to which the codes refer. The bureau further publishes for distribution throughout the industries and among organizations of workers interested in each specific code the industrial safety codes as they are developed.

Another function of the bureau in connection with the American Engineering Standards Committee work is to urge upon the States the adoption of these safety codes. A résumé of State action on national safety codes so far as it had proceeded at that time was printed in the Labor Review for October, 1926 (pp. 47-50).

Some 40 codes have been projected, on most of which some work has been done. Of these, 18 have been completed and approved.

Industrial Accident Prevention Conference

AN industrial accident prevention conference, was held at the Mayflower Hotel in Washington, D. C., July 14-16, 1926. In response to a call from the Secretary of Labor, 33 States sent representatives to this conference, which was attended by 268 persons. The vital purpose of the meeting was to secure additional cooperation on the part of the States in the collection of adequate and uniform statistics of accidents, by industries, by causes, and by severity, with special reference to the amount of exposure or the man-hours worked in each case. It has been the position of the Bureau of Labor Statistics all along that accident reports, to be of any value for prevention purposes, must show all the essential facts, not only of the accident itself but of the industry and department of the industry in which it occurred and the amount of human exposure to accident at that point or at least in that department. This would make possible an accident rate or ratio based upon man-hour exposure and not, as is

now generally speaking the case, upon amount of pay roll or volume of production. The conference itself was very satisfactory, and the resulting State cooperation has been entirely so. It is confidently believed that all the fruits of that conference have not yet been realized.

Industrial Hygiene

THE work of the Bureau of Labor Statistics in the field of industrial hygiene includes the publication of occasional bulletins dealing with industrial poisons or diseases; a review of current medical literature as it relates to occupational hazards, which is published each month in the Labor Review; and replies to the many inquiries regarding specific poisons or the hazards from gases, dusts, and fumes, which are addressed to the bureau either directly by the persons requesting the information or by other Government offices which have referred the inquiries to this bureau.

Recent bulletins dealing with the health of workers which have been published are Bulletin No. 426, Deaths from Lead Poisoning, and Bulletin No. 427, Health Survey of the Printing Trades. Bulletin No. 426 is a statistical study from various sources of the number of deaths occurring from lead poisoning in different occupations in the United States and certain of the European countries, and Bulletin No. 427 embodies the results of a field survey of health conditions in the printing trades.

In the review of current medical literature relating to industrial hygiene and occupational diseases published in the Review, digests are given of articles appearing in American and foreign medical journals and of special reports prepared by Government bureaus or other investigating agencies. Some of the subjects covered in the past year were as follows: Health hazards in brass foundries and in photo-engraving plants; lead poisoning among motor-car painters and in the rubber industry; benzol poisoning; occurrence of nickel rash in a nickel refinery; carbon-monoxide poisoning; silicosis in gold mines; occupational skin diseases; eye conservation in industry; and the physical and mental effects of noise.

The requests for information in regard to specific hazards which are directed to this bureau come from employers who suspect that some substance or process in use in their plants may be hazardous or who have had suspicious cases of illness arise, and from employees who fear their working conditions may be harmful to health. During the past year information has been sought from the bureau in regard to the hazards, symptoms of poisoning, and so on, resulting from exposure to fumes of nitric acid, sulphur and carbon bisulphide and the danger from exposure to lead, aniline, carbon tetrachloride, dibutyl phthalate, tetraethyl lead, brass, benzol, nitrobenzol, and mercury. Inquiries were received also in regard to the ill effects of gasoline and other petroleum products and to the incidence of cancer due to these products; to the effect of dust inhalation on metal grinders; and to the effects of humidity on the health of workers.

Every effort is made by the bureau to supply the information requested in these inquiries, but this work is hampered by the lack of a properly equipped personnel. For the regular work of the bureau on this subject the part-time services of only one person have been available.

Elimination of the Manufacture of Fireworks Containing Phosphorus

A SPECIAL study made by the bureau and published in 1926 (Bul. No. 405) demonstrated the dangers incident to the use of white or yellow phosphorus in the manufacture of fireworks. The Department of Labor, through the Bureau of Labor Statistics, thereupon attempted to secure agreement among manufacturers to discontinue the making of fireworks requiring phosphorus. As a result an agreement was made, through the Bureau of Labor Statistics, between the department and all the manufacturers of such articles that they would cease to manufacture these particular types of fireworks on or before August 15, 1926. The text of that agreement was as follows:

We, the undersigned manufacturers of the articles hereinafter named, agree jointly and each on his own behalf that we will discontinue on or before the 15th of August, 1926, the manufacture of any type, form, or style of fireworks containing white or yellow phosphorus, and that after the disposal of the present stocks on hand and specifically after April 1, 1927, we will not sell or offer for sale any forms of fireworks, novelties, or products or other devices that contain white or yellow phosphorus.

And we hereby agree with the Secretary of Labor not only to cease the manufacture and sale of these articles on the dates hereinbefore specified, but to agree to any form of legislation or rules or regulations which may be instituted to prevent others from engaging in the manufacture or sale of such commodities, believing as we do that the injury resulting from such articles far exceeds their worth to the public.

At the present time we, the undersigned, are so far as we know the only manufacturers of the above-named type of fireworks.

And we, the undersigned manufacturers, do hereby certify that we have the authority to bind our respective concerns in the manner and form hereinbefore stated, and that the signatures hereinafter made are ample for this purpose.

It is understood by the parties signatory hereto that this agreement shall only become effective upon the acceptance of the same by other concerns engaged in the manufacture of fireworks as per list, and upon its acceptance by the other concerns as per list shall immediately become effective. This agreement is intended to be perpetual from the time of its adoption.

The Commissioner of Labor Statistics or the Secretary of Labor hereby agrees to notify the parties concerned when they shall have become parties hereto.

By correspondence with the wholesalers and jobbers it was agreed that the purchase of this class of fireworks for resale would end on or before April 1, 1927. It is believed that these agreements were lived up to, and there is every reason to think that July 4, 1927, saw the end of the use of these dangerous fireworks.

Labor Legislation in the Various States and Decisions of Courts Affecting Labor

THE two principal lines of work of the legal division of the bureau that have been carried on since its establishment have been the compilation of bulletins reproducing the labor laws of the United States and a presentation of selected court decisions of interest to labor. Beginning with 1912, bulletins on court decisions have been separate publications, usually issued annually, but in two instances combining two years in one.

The sources of the material contained in the bulletins relating to labor laws have been the officially published codes, compiled statutes, and session laws of the various States. For the court decisions the national reporter system of the West Publishing Co. is the chief reliance. Each issue is examined for the purpose of discovering its

contents, and representative cases or cases of striking importance are selected for presentation in the annual bulletins.

Besides these general bulletins a separate series is published on the subject of workmen's compensation and insurance. An occasional complete presentation of all workmen's compensation laws and an annual review of new legislation and amendments make up this series.

Occasional bulletins are also prepared on subjects of current importance, such as the minimum wage laws, labor laws declared unconstitutional, and wage payment laws. Reports of the bureau having a specific legal basis, as on convict labor, carry also a compilation of the laws on the subject, which is prepared by this section.

During the past year the following bulletins on the above-mentioned subjects have been published: Laws relating to the payment of wages (Bul. No. 408), Decisions of courts and opinions affecting labor, 1926 (Bul. No. 444), Labor legislation of 1926 (Bul. No. 434), and Workmen's compensation legislation of the United States and Canada (Bul. No. 423).

For the Labor Review, articles were written on subjects of current economic and legal interest, or giving account of outstanding decisions or action; digests were also prepared of reports of the State compensation commissions.

A considerable amount of research was involved in the preparation of answers to inquiries which reached the department on subjects of interest involving the legal aspects of labor problems. Various incidental activities were also engaged in, as called for by the Secretary of Labor or the Commissioner of Labor Statistics, such as data for the drafting of bills and brief discussions of specific points of legal interest coming before the department.

Cooperation

THE Bureau of Labor Statistics has for nearly a decade been following the development of the consumers' cooperative movement not only in the United States but throughout the world. An attempt is made to sketch for the public all new developments by means of the Labor Review, in which a regular section on cooperation is carried month by month. As the cooperative activities in the agricultural field have long been covered by the Department of Agriculture, the bureau has confined itself to the other phases of the movement—those in which the working people are especially interested. In 1920 the bureau made the first comprehensive statistical study of the consumers' societies made in this country.

A second and even broader study of the cooperative movement was completed and published during the past year (Bul. No. 437). This study covered all phases of the movement except the cooperative marketing of agricultural products. The report includes credit societies; cooperative workshops; consumers' societies selling general merchandise, gasoline and motor oils, and bakery goods, and those operating laundries, restaurants, boarding houses, and the like; and housing societies. The section on consumers' societies is a revision of the study of this type of society made in 1920.

On the basis of returns made to the bureau it is estimated that the membership of the types of societies covered in the study numbers

more than 700,000 persons and that the combined business of the societies amounts to considerably in excess of \$300,000,000 a year. More than \$1,250,000 was returned in patronage dividends in 1925 by the societies reporting.

The credit societies are expanding more rapidly than any other phase of cooperation, due to the recent passage of enabling legislation in many States. These societies are filling a real and widespread need, supplying a source of credit at low rates for persons of small income, who have heretofore had difficulty in securing loans. The value of this type of society is attested by the fact that although credit cooperation has developed only within the past few years, at the end of 1925 at least 170,000 persons were members of credit unions, there were societies in some 30 States, and about \$30,000,000 was disbursed in loans during 1925. Besides the benefit to the borrowers of the low rate of interest, the societies reporting returned in dividends more than \$450,000.

The consumers' societies have come through a period of hard times since 1920, but now seem to have rallied. The stability of the movement seems further favored by the shift of emphasis within the movement from high dividends to the accumulation of adequate reserves.

The housing societies are proving their worth in congested places, such as New York City, where accommodations are difficult to secure and rents are high.

The cooperative workshops, though presenting an interesting attempt to solve the problem of employment and livelihood, are not expanding to any appreciable extent. The study covered 21 of the 39 known to be in existence in 1925. These had a total membership of 2,438, of whom 465 were employed in the business; 807 non-members were also employed. The business of these societies for 1925 amounted to somewhat over \$4,500,000 and profits were made by 12 societies amounting to about \$250,000. Societies of this type are often handicapped by lack of knowledge of salesmanship and market conditions, and hence may have difficulty in disposing of their product.

The study disclosed on the whole a slow but healthy growth in cooperation since the bureau's first cooperative study in 1920.

In order the better to keep in touch with developments in the movement a representative of the bureau is sent to the national congress of consumers' societies held every two years in one of the various cities of the United States.

Workmen's Compensation

THE Bureau of Labor Statistics has by general agreement become the clearing house for information concerning the activities of the various State boards and commissions administering the workmen's compensation laws of the various States.

In addition to the publication annually of workmen's compensation laws as amended in the various States, a section devoted to this topic is carried in the *Labor Review*. The bureau also publishes the proceedings of the annual conventions of the International Association of Industrial Accident Boards and Commissions, which is an organization composed of the various State workmen's compensation

boards and commissions. During the year the following bulletins were published dealing with the subject of workmen's compensation: Bulletin No. 423, Workmen's Compensation Legislation of the United States and Canada, and Bulletin No. 432, Proceedings of the Thirteenth Annual Meeting of the International Association of Industrial Accident Boards and Commissions.

Building Operations in Principal Cities of the United States

THE Bureau of Labor Statistics collects data concerning building permits issued, annually from cities having a population of 25,000 or over, and semiannually from cities having a population of 100,000 or over. Summary figures are given in the Labor Review and detailed figures are published in bulletin form.

Reports were received from 294 cities for the calendar year 1926, about 90 per cent being received by mail either direct from the local building officials or from State bureaus cooperating with the bureau in this work. The State bureaus of Illinois, New York, New Jersey, Massachusetts, and Pennsylvania are cooperating with the Bureau of Labor Statistics.

Data from 10 per cent of the cities had to be collected by agents of the bureau. These data were obtained in the offices of the local building officials either from records kept by them or directly from the building applications. In 1920, when this work was first taken over by the Bureau of Labor Statistics from the Geological Survey, it was necessary to send agents to over 40 per cent of the cities in order to collect the data in the manner desired.

The primary purpose of the bureau in collecting information concerning building permits issued is to show the housing facilities provided in the different cities of the country, both as to the number of families provided for and the kind of dwelling provided. In addition the bureau also shows the amount expended for building in the different cities and the changes in the amounts spent for the different kinds of buildings, thus in a general way indicating the amount of employment in the building trades.

In 1926 reports were received from 257 cities which have reported continuously since 1921. In these 257 cities 462,114 families were provided for in new buildings. Of this number only 40.7 per cent were cared for in one-family dwellings, 13.9 per cent in two-family dwellings, and 45.4 per cent in multi-family dwellings (apartment houses). In 1921, on the other hand, 58.3 per cent of the 224,545 families provided for in that year were domiciled in one-family dwellings, 17.3 per cent in two-family dwellings, and only 24.4 per cent in apartment houses.

This change in the character of American homes seriously affects the wage earners of the country. First, the increased apartment-house living undoubtedly means a smaller percentage of homes owned. This makes for less settled conditions in the community. Less observed, but also very significant, is the effect that such a fundamental change in type of building has upon the character of the work demanded of those employed in the construction industry. Broadly speaking, the one-family dwelling is primarily a matter of bricks and wood, and the workers employed are chiefly bricklayers and carpenters. The large apartment house, on the other hand,

while still demanding carpenters and bricklayers, also calls for structural-iron workers, for concrete work on a large scale, very often for elaborate stone, tile, and sheet-metal work, and usually for a number of accessory trades which are needed very little or not at all in the building of small residences, particularly those of the cheaper type.

While the figures for these cities as a whole show that nearly one-half the total number of families provided for by new buildings were to live in apartment houses, the individual cities differ greatly in this respect. In New York, for instance, 71.6 per cent of the families provided with new dwellings were cared for in apartment houses, while in Baltimore only 6.8 per cent were to live in these multi-family dwellings.

Personnel Activities for Employees

AMONG the special surveys made by the Bureau of Labor Statistics during the year the most extensive study was that on personnel activities for employees. The study covered, in the main, plants in which more than 300 persons were employed, and industries in different sections of the United States were visited by agents of the bureau, so that the conditions shown may be considered fairly representative of the policies in effect in the larger plants throughout the country.

The study was undertaken because of a request by the National Conference on Outdoor Recreation that the bureau make a survey of the facilities provided industrial employees for participating in outdoor recreation and sports, but was extended to cover other features of personnel work as well. Schedules were secured from 430 plants with a total of nearly 2,000,000 employees. Various articles on subjects covered in the study were published in the *Labor Review*. The full report is now in press.

A comparison of conditions with those shown in a similar survey made 10 years ago shows a considerable extension of many of the services provided by employers and improvement in the quality of service rendered. Emergency hospitals and lunch rooms are among the more necessary features of personnel work and the proportion of employers providing these services is greater than at the time of the previous study. There is a larger number of well-equipped dispensaries or emergency hospitals at the present time and more companies are doing work along preventive lines in addition to the care of actual cases of sickness or injury. Three hundred and seventy-three of the companies visited have hospital rooms and provide the services of one or more physicians or trained nurses or both, while 34 furnish first-aid equipment only.

The granting of vacations with pay to production workers is becoming increasingly popular as employers are coming to realize that the costs are not prohibitive. In the present study 133 firms were found to be giving vacations to shop employees who have a record of service varying in the different establishments from a few months to not more than two years. This is in decided contrast to conditions 10 years ago, when only 16 firms were found to be giving vacations to the larger part of their wage-earning force. The usual vacation is one week, although when less than one year of service is required it may be for varying lengths of time from three days to a week. Additional leave is granted by many firms for longer periods of service

usually beginning with 10 years. Sick leave with pay granted to factory workers according to a definite plan was also found in a number of cases.

Facilities for recreation, both indoor and outdoor, are provided by many companies. These take the form of clubhouses or clubrooms, athletic fields, country clubs, or summer camps, bowling alleys, and game rooms, swimming pools, and so on. In many cases the athletics are in charge of a director and there are many organized teams of various kinds.

A very great extension in the provision of group insurance has also been one of the developments of recent years. This form of insurance, which is changing from straight life insurance paid for usually by the employer to insurance covering in addition sickness, accident, and even endowment features, was found in force in 186 of the establishments visited.

Special Studies Now Being Made

State and Municipal Pensions

THE public interest in pension systems appears to be growing and the bureau is continually receiving requests for information as to where such systems are in use, how effective they are, and what are their most important features. To meet these inquiries the bureau has undertaken a study covering all state-wide pension systems, and municipal pension systems in cities having a population in 1926 of at least 400,000. The intention is to find what classes of employees are brought under such systems; what is the general practice as to requiring contributions from employees; how the retirement allowance is calculated; what are its minimum and maximum amounts; what conditions as to age and years of service must be fulfilled before a pension can be claimed; at what age retirement is permitted; at what age, if any, it is compulsory; whether pensions are given to disabled employees and, if so, under what conditions; what is the custom as to refund of contributions in case of death or withdrawal before a pension is gained; what is the cost of the system; how expenses of administration are met—in brief, to learn all the attainable facts which may be of use to those contemplating the establishment or the reorganization of a retirement system.

Labor Turnover

The Bureau of Labor Statistics was the pioneer in research work as to the extent, causes, and cost of what has now become generally known as "the labor turnover." These studies had to be dropped in 1920 when the first severe reduction in the bureau's appropriations was made. During the past year efforts were made to resume this work. Cooperation with the Metropolitan Life Insurance Co. has been perfected to the extent that that organization is now arranging the contacts with large employers who furnish to the insurance company their records of labor turnover. The understanding between this bureau and the Metropolitan Life Insurance Co. is substantially this, that as soon as a sufficient number of establishments signify their willingness to report labor turnover monthly

to make it possible to classify these returns by industries and there is a sufficient volume of reports in each industry to make it possible to establish a labor turnover index, then the entire matter will be turned over to the Bureau of Labor Statistics. In other words, the Metropolitan Life Insurance Co. undertook to do the field work necessary to put a labor turnover study on its feet. The results of the work of the Metropolitan Life Insurance Co. are published quarterly in the Labor Review.

The value of a labor turnover study which could be developed into index numbers by industries is only beginning to be understood by the manufacturers and by the workers.

It is now planned to have this study include also a labor stability index; that is to say, to show not only the number of workers who quit, die, or are discharged but also those who remain in the employ of the same corporation or company for a period of 12 months or longer. It is beginning to be realized that a study of the "stays" is quite as valuable as a study of the "quits." Besides it brings out the fact that labor turnover is frequently confined to a very small percentage of the total employees. Cases are on record where there was a turnover of 234 per cent as applied to the entire pay roll; 19 per cent, however, remained during the year, so that the 234 per cent must be applied not to 100 per cent of the employees but to 81 per cent. Again, there was an instance where 82 per cent of the employees remained throughout the year, so that whatever labor turnover there was applied to 18 per cent of the jobs, but these changed so frequently that there was a 30 per cent labor turnover applied to the entire pay roll.

The importance of locating the spot to which heavy turnover applies is for the purpose of determining whether or not there are bad conditions of labor in that particular area of the plant.

Another value of labor turnover statistics that is just beginning to be realized is their application as a quantitative measure of the success of welfare plans, shop committee plans, stock distributions, and other schemes having as their basic economic purpose the holding of employees.

Apprenticeship in the Building Trades

Recent building activity throughout the country emphasized some unwholesome and unprofitable conditions in the building industry and led to a renewed interest in the question of apprentice training. To determine to what extent apprenticeship is a factor in the industry, and what effect the agitation for a revival of the apprentice system is having, the Bureau of Labor Statistics began an investigation in June, 1926, in several cities. The bureau limited its study to actual apprenticeship; that is, actual contract or some equivalent obligation extending over a stipulated period of years. Helpers who are hired and dismissed according to the needs of the moment were not considered, even though they might be boys of apprentice age who may eventually become journeymen.

The survey covered the following cities, which are considered representative: Atlanta, Ga.; Baltimore, Md.; Birmingham, Ala.; Boston, Mass.; Buffalo, N. Y.; Charleston, S. C.; Chicago, Ill.; Cleveland, Ohio; Detroit, Mich.; Memphis, Tenn.; Milwaukee, Wis.; Minneapolis, Minn.; Newark, N. J.; New Orleans, La.; New York City,

N. Y.; Niagara Falls, N. Y.; Philadelphia, Pa.; Pittsburgh, Pa.; and St. Louis, Mo.

Some of these cities were known to have organized movements for training apprentices in accordance with provisions of the Federal vocational education law. These were studied to determine the operation of the system and the effects of the movement on the supply of mechanics. Other cities, about which the bureau had no previous information, were visited to determine whether or not anything was being done in apprenticeship training by any of the parties at interest.

Sources on which the bureau has drawn for information are the local building-trades unions, the trade associations of employers where they are organized, builders' exchanges, school authorities, and representative individual employers. Among the individual employers visited were union and open-shop men and contractors who do and who do not employ apprentices.

Factors entering into the apprentice question which have been made the salient points in the investigation are the supply of trainable material, the demand for trainees on the part of the contractors, the attitude of unions and employers toward apprenticeship and the efforts they are making to promote it, the extent and effect of union regulations governing apprenticeship, provisions for continuity of employment, the practicability and effectiveness of part-time school training, the different plans of concerted action on the part of organized employers and journeymen, the record of completion of apprenticeships, and the effect on the local building situation of the various systems on the one hand and lack of system on the other.

Accident Compensation to Seamen

A study is being made of the kind and severity of accidents among seamen and the amount and character of the compensation received.

Publications

DURING recent years the bureau has placed increasing emphasis upon the prompt publication of the results of its work. For this purpose the Labor Review is of primary importance. In it are published the monthly compilations of retail and wholesale prices, employment statistics, and statistics of strikes and lockouts; the semiannual surveys of changes in cost of living; summaries of all wage surveys as soon as such surveys are completed; and the results of special studies, either in whole or in part.

The detailed basic data of all important studies are later published in bulletin form. But there is usually and necessarily some delay in the printing of such bulletins, and the prompt publication of the principal findings of a study in the Labor Review meets the requirements of the great majority of interested persons.

Furthermore, for the use of those particularly concerned, mimeographed or printed releases of the monthly studies of employment and prices and of the semiannual cost-of-living surveys are prepared and made public as soon as the data are assembled. Thus, as an example, a summary of the employment statistics for each month is ready for distribution in mimeographed form on the 16th of the succeeding month, and a printed pamphlet containing the full report, with charts, is published about two weeks later.

Labor Review

The Labor Review is published on the 16th of each month. As noted above, its primary function is to serve as a medium for the prompt publication of the results of the bureau's surveys and studies. In addition it seeks to follow the work of other agencies engaged in activities affecting labor and to present the results of studies and reports in the labor field both in the United States and foreign countries. To this end the editorial division of the bureau secures and reviews practically all the current publications in any way dealing with labor matters.

The Labor Review averages about 225 pages each month. It is impracticable to attempt a review of all the material published therein during the past year. It may be noted, however, that in addition to the current reports on prices, employment, wages, and so forth, and the current reviews of labor developments, the Labor Review during that period contained some 35 special articles covering a very wide field. Most of these represented original work on the part of the bureau's staff, while a few were contributed by outside students and investigators. Of these special articles the following are believed to be of unusual interest: Prevalence of five-day week in American industry; the municipal market system of Norfolk, Va.; changes in occupational character of immigration since the war; chambers of labor in Austria; productivity of railroad labor; two new monthly indexes of factory labor turnover; labor conditions during the 1926 apple harvest in the Wenatchee Valley; comparison of employment and productivity in manufacturing industries, 1919 to 1925; the work of the International Labor Organization; exploitation of labor through nonpayment of wages, and efforts of labor offices to enforce payment; and cooperation as a world movement.

Bulletins

With few exceptions the bulletin method of publication is reserved for the more extended studies, which are too long for complete publication in the Labor Review. As already pointed out, however, the effort is made in every case to publish a summary account of each study in the Labor Review, this summary appearing well in advance of the complete report and for most readers supplying all the information desired. The bulletins, however, contain the detailed data which are essential for intensive analysis of a subject.

Handbook of Labor Statistics, 1924-1926

During 1927 the bureau compiled and published a Handbook of Labor Statistics (Bul. No. 439), in which an effort was made to bring together, in convenient form for reference purposes, digests of all the material published by the bureau of sufficiently late date to be of present-day interest and value. It is proposed to issue similar handbooks from time to time in future years.

Printing

The 12 numbers of the Labor Review issued during the past fiscal year represented a total of 2,785 printed pages. The 24 bulletins printed and delivered during the year represented a total of 3,926

printed pages. This makes a grand total of 6,711 pages. The printing is done by the Government Printing Office.

Financial

THE appropriation of the Bureau of Labor Statistics for the fiscal year 1926-27 was divided into two parts—salaries, \$220,000, and miscellaneous expenses, \$74,000. There were 115 persons on the permanent pay roll of the bureau on June 30, 1927.

The scope of the bureau's work is very extensive and much remains undone because of the limited appropriations.

Public Service Retirement Systems: State Employees

A PART from teachers' retirement systems and plans for pensioning limited groups, such as judges or war veterans employed in the public service, six States (Maine, Massachusetts, Connecticut, New York, New Jersey, and Pennsylvania) have legislation providing for the retirement on allowance of State employees. Such legislation is of decidedly recent date. Massachusetts led the way in 1911, with an act covering all persons employed "in the direct service of the Commonwealth or in the service of the metropolitan district commission, whose sole or principal employment is in such service." In 1919 Connecticut passed an act authorizing retirement pensions for persons in the State service who met certain requirements as to age and length of service, and Maine recast her laws so as to extend to all State employees legislation which up to that time had applied only to those in the prison service and to public employees who were veterans of the Civil War. New York in 1920, New Jersey in 1921, and Pennsylvania in 1923 enacted laws establishing state-wide retirement systems, since which time there has been a lull in such legislation. The plans of New York, New Jersey, and Pennsylvania have already been discussed in the Review, in its issues for August and September. The other three are described in the following pages, together with a general summary and comparison of all six systems.

State Pensions in Maine

THE present situation as to pension legislation in Maine has been a progressive development from an act passed in 1909, which applied only to officials and employees of the State prison service. These, after 30 years of service, or, if they had reached the age of 60, after 20 years of continuous service, might be retired upon the recommendation of the warden and with the approval of the board of prison commissioners and the governor and council, on a pension of one-half the salary received at the time of retirement. In 1913 an act was passed providing a similar pension and retirement for veterans of the Civil War in the State service, if they became incapacitated for active duty after 25 years of continuous service. In 1919 a third act authorized the retirement, after 25 years of continuous service, of any employee in any State institution or State department, upon the recommendation of the superintendent and board of trustees. In

this case, while no minimum was set for the pension, its maximum was placed at one-half the average salary received for the last five years. In 1923 an amendment to this act carefully defined the word "employee" so as to include clerks and other employees of the several State departments and State institutions, and teachers in the State normal schools, including such as had retired since March 1, 1920. In 1925 another amendment brought within the scope of the law teachers in the Madawaska Training School, including those who had retired since March 1, 1920.

The plan, as established by these acts and amendments, is not contributory, and does not give the employee any inherent right to retirement or pension. The superintendent of an institution or the head of a department may recommend an employee's retirement, after 25 years of service, if he considers it best to do so. Such recommendations are sent to the governor and his council, who have full discretion as to what action they shall take, except that, if they decide to approve the retirement, the pension granted must not exceed the limit set by the law. No fund is maintained, but the legislature at each biennial session, makes an appropriation to cover pension payments for the next two years, estimating the amount required on the basis of the last two years' experience. Should a deficiency occur, the amount needed is transferred from one of the other State funds.

Very few retirements have been made under these provisions. Since the first law went into effect, 19 in all have been placed upon the pension roll, of whom 14 were still alive at the end of 1926. Eight of these retirants were prison employees, four were Civil War veterans, four were employed in the State hospital, two in the state-house, and one was a teacher. The pensions allowed them ranged from \$252 per annum to \$884, the average being \$539. As of December 31, 1926, the annual pension outlay was \$8,000.

State Pension for Retired Employees in Connecticut

IN 1919 Connecticut passed an act to provide for retiring State employees (Public Acts, 1919, ch. 210), which became effective on July 1 of that year. Since then various amendments have been passed, liberalizing the conditions for retirement. The system is noncontributory. The original act applied to all regular State employees in the service at the time the law became effective and to those who entered thereafter. In 1923 amendments were passed bringing under the terms of the act persons who had retired before 1917 with the qualifications as to age and service established by the act. Under these amendments three persons were placed on the pension roll.

Administration

The State board of finance and control, composed of 10 members, is in charge of the system.

Source of Funds

The State pays the entire amount of the pensions, or retired salaries, as they are termed in Connecticut. An appropriation is made for this purpose in the general fund of the budget every two years, according

to an estimate of the amount needed. In case the estimate proves too small, whatever amount is needed to make up the balance is transferred from the deficiency fund.

Conditions for Retirement

The conditions for retirement have been altered several times, but by an amendment passed in 1923 length of service is made the only qualification, except in the case of those aged 70 or over who have not completed 30 years of service. These may be retired by the board of control after they have served for 20 or more years in the aggregate. For others, retirement is permitted, regardless of age, after 30 years' service, with a higher allowance for those who remain in the service for 40 years.

There is no provision for disability allowance.

Retirement Allowances

Under the amendment of 1923 an employee who is retired after 30 years of service, or who, being over 70, is retired after 20 years, receives an annual allowance equal to one-half his average annual salary for the last five years. One who has served for 40 years receives an allowance equal to three-fourths of the salary at the time of retirement. Those who, under the earlier provisions of the act received allowances of a different amount are to continue to receive the sum first set, regardless of the changes introduced by the amendment of 1923.

Statistics

At the end of the first year of operation there were eight persons on the roll, and during that year \$4,269.56 was paid out for pensions. At the close of the fiscal year ending June 30, 1926, after the system had been in existence seven complete years, there were but 41 on the pension roll, or approximately 1.4 per cent of the active force employed that year. The total amount paid out in pensions in 1926 was \$52,411, or 0.6 per cent of the pay roll of the active force.

Since the law first went into effect 56 persons have been placed on the pension roll. For these the average age at retirement was 71 years, the average length of service was 33 years, and the average annual pension was \$1,123.

In addition to these 56 persons 11 have been pensioned under special acts having no connection with the public service system, their pensions amounting in 1926 to \$12,420 a year.

The total amount paid out for pensions from July 1, 1919, to June 30, 1926, was \$177,937. This total, however, includes the special pensions just mentioned, and as these varied from year to year, it is not possible to say exactly what proportion of the amount was chargeable to the public service pensions.

State Employees' Annuity Fund of Massachusetts

PREVIOUS to the passage of chapter 532 of the Acts of Massachusetts of 1911, which established the present contributory system, there was no general retirement plan for the employees of the Commonwealth or the metropolitan district. Some special groups had

from time to time been covered by noncontributory pension systems which the State administered and of which it bore the entire cost. These earlier systems may be summed up in a few words. The groups covered comprised judges, court officers and messengers, veterans of the Civil War, certain persons employed in prisons and reformatories, the metropolitan park police, the district police, veterans of the Spanish War (veterans of the World War were later included with these), and scrub women employed in the statehouse. All of the laws under which these pensions were granted have been amended so that persons belonging to these groups who entered the public service after July 1, 1921, should come under the general contributory plan, but those already in the service at that time remained under the provisions of the earlier plans.

Under the noncontributory plans persons were retired by their department head, subject to the approval of the governor and council. Their pensions are paid from special appropriations made in accordance with the laws providing for the different groups. The total amount paid in pensions under these plans during the year ending November 30, 1926, was \$167,478.

The new system was established by the act referred to above and became effective June 1, 1912. It has been amended several times, and in its present form is contained in chapter 32, General Laws of Massachusetts.

Scope of System

In general, the system covers all persons permanently and regularly employed in the direct service of the Commonwealth or in the service of the metropolitan district commission, whose sole or principal employment is in such service. Membership, after a probationary period, is obligatory upon all employed since the establishment of the system, but those in the service before that date were given their choice of entering or remaining outside. The law required them to make this choice before January 31, 1912, but this period was afterwards extended, and in 1924 a special amendment gave those who had failed to enter the privilege of becoming members at any time before reaching age 70, provided they paid into the fund a sum equal to what would have been the amount of their regular contributions, with accumulated interest, had they entered June 1, 1912.

Certain classes of State employees are excluded from membership, and certain others come in under special provisions. The excluded classes are, briefly, as follows: (1) Officers elected by popular vote; (2) persons devoting too little time to the service to make it their "sole or principal employment"; (3) persons aged 55 or over when employed; (4) judges; (5) certain groups of employees entitled to pensions under the earlier schemes.

Those brought in by special provision include employees paid partly by the State and partly by a county having a retirement system; persons, regardless of age, in the employ of a department or institution formerly administered by a city, county, or corporation which is taken over by the State; the nonteaching force, such as janitors, engineers, etc., employed in training schools maintained and controlled by the department of education in buildings owned by the Commonwealth (if the building is not so owned, these are not

employees of the State, and consequently are not included); and persons aged 55 or over who, previous to entering the State service, have been members of the teachers' retirement association. Officials appointed by the governor for a fixed term of years, if under 55 at the time of appointment, may become members of the system by making written application within one year from the date of appointment or reappointment.

A further special provision covered employees who were 55 or over at the time the system was adopted. These might not become members, but were entitled upon retirement to a nonmember's pension of \$200 a year.

Administration

The administration of the retirement system is vested in a board of three members, the State treasurer, ex officio, one employee member elected by his fellows, and the third chosen by these two. The State treasurer is custodian of the funds of the system and has power to invest and reinvest, in accordance with the law, any amounts not required for current disbursements. The board is required to file annually with the commissioner of insurance a sworn detailed statement showing the financial condition of the system on December 31 and its financial transactions for the year ending on that date. Subject to the same conditions and requirements the treasurer must file a sworn statement showing the financial condition of the system on the same date.

Source of Funds

Contributions from members.—The employees are required to make contributions of 5 per cent of their salaries up to \$1,560 a year, any amounts received in excess of that sum being exempt from the requirement. The original law provided that the contributions should be not less than 1 nor more than 5 per cent of the salaries, but it was found difficult to establish any general plan of percentage which would accomplish the same proportionate retirement allowance for all members, since at that time there were no data as to ages at which employees would elect to retire. It was decided that members should be given the choice of contributing 3 per cent or 5 per cent of the salary, but later it was ruled that all who entered the service after June 1, 1918, must pay the 5 per cent rate. In 1926 an amendment to the law permitted those employees who had at some time contributed only 3 per cent of their salary or wages and who had changed to the 5 per cent basis to make up the amount required to bring the accumulated contributions up to what they would have been had the 5 per cent rate been chosen from the first. As the retirement allowance depends on the amount of accumulated contributions, as well as on the age at retirement, the importance of this provision is evident.

Contributions from the State.—The State contributes such amounts as are needed (a) to meet its share of the allowances for current service; (b) to pay the full allowance for service rendered prior to June 1, 1912; (c) to make up any deficiencies due to an inadequate estimate of the needs of the preceding year; and (d) to meet the cost of disability retirements and benefits to dependents of employees who die as a result of injury received in the service. The board

submits each year estimates of the amount of appropriations required from the State to pay the allowances for the following year. It has been found that about 7 per cent of the members eligible for retirement leave the service without waiting for compulsory retirement at 70. The State also pays the entire cost of administering the system.

Conditions for Retirement

Superannuation or service retirement is permitted at 60, after 15 or more years of continuous service, or, regardless of age, after 35 years of continuous service. Employees who, when the system was established in 1912, had reached the age of 55 years might be retired at any time after reaching 60, whatever their length of service might have been. Retirement is compulsory at 70.

Retirement is permitted after 15 years of continuous service if an employee becomes permanently disabled. Medical certification is required and reexamination may be ordered by the board at any time.

Accidental disability retirement is permitted, without requirement as to age or length of service, for any member who is found, after examination by one or more physicians selected by the board, to have been permanently incapacitated, mentally or physically, by injuries sustained through no fault of his own while in the actual performance of duty.

Written application for disability retirement must be received by the board within two years from the date of the applicant's last salary payment.

Other retirements.—When members of the system are husband and wife, if one of the two retires or is retired, the board may also retire the other at the same time. When this is done, the enforced retirant receives an allowance calculated in the usual way for the age attained, except that the provision for minimum allowances does not apply in such a case.

Retirement Allowances

Upon service or superannuation retirement the member receives an allowance consisting of an annuity bought by his accumulated contributions, plus a pension of equal amount paid by the State. The amount of the annuity, and consequently of the pension, depends upon the sex and age of the retirant, and the amount of the accumulated contributions (which in turn depends upon the length of service). The total allowance may not fall below \$300 a year nor exceed one-half of the retirant's final compensation; i. e., his average annual salary for five years before retirement. If the accumulated contributions would purchase an annuity amounting to more than one-fourth of the final compensation, the extra amount is returned to the retirant in a lump sum. For those in the service prior to 1912, if their accumulated contributions will not purchase an annuity equal to one-fourth of their final compensation, the State pays whatever pension is needed to bring the total allowance up to the maximum permitted, one-half of the final compensation.

The allowance for permanent disability retirement is calculated in the same way as the allowance for service retirement.

For accident disability retirement, the allowance is one-half the salary received at the time of the accident, the State paying whatever

pension is needed to bring the total allowance up to this figure. If the retitant is entitled, as a result of his injury, to receive compensation under the workmen's compensation law, he must choose between this and the retirement allowance, as he can not receive both.

Options.—Instead of taking the normal retirement allowance, calculated as above, a member may if he prefers take upon retirement a smaller allowance with the proviso that, if he dies before having received the full actuarial equivalent of his contributions at the time of retirement, any difference will be paid to his estate.

Refunds.—In case of withdrawal, dismissal, or death, a member's accumulated contributions are returned either to him or to his estate.

Provision for dependents.—If a member is killed, or dies as a direct result of an accident incurred in the performance of duty, his widow receives, during widowhood, the allowance to which he would have been entitled had the result been permanent disability instead of death—one-half of his salary at the time the accident occurred. If there is no widow, the same allowance is paid to a child or children under 16, and is continued until the youngest child reaches 16.

In other cases no provision is made for dependents, except as the choice allowed under the options at the time of retirement makes some such provision.

Statistics

The contributory system has been in operation approximately 15 years. It must be remembered that it exists side by side with the old noncontributory systems which still cover quite a number of the State employees; therefore, the number of State employees and the members of the system are not identical. As mentioned before, since 1921 no new memberships in noncontributory systems have been allowed.

The following table shows, for the years specified, the approximate number of State employees, the active membership of the State system, and the number of its beneficiaries:

TABLE 1.—MEMBERSHIP AND BENEFICIARIES OF STATE RETIREMENT SYSTEM,
1913, 1920, AND 1926

Year ending Nov. 30—	Number of State employees	Active membership of system	Number of beneficiaries	Per cent beneficiaries form of State employees	Per cent beneficiaries form of active membership
1913		4,020	77		1.92
1920	10,593	6,282	209	1.97	3.33
1926	13,654	8,693	¹ 352	2.58	4.05

¹ Includes 3 widows.

The difference between the membership of the system and the number of State employees is not quite so great as indicated by this table, because the latter group includes employees who have not finished their probationary period, but who will at its close become members of the State system.

It will be seen that the increase in beneficiaries has been gradual and that their ratio to the number of active members at the close of the period is small. The number on the pay roll is, of course, con-

tinually changing as the old annuitants die and the new ones are placed on the roll.

Since the time the law became operative, June 1, 1912, to the end of November, 1926, 532 employees have been granted a retirement allowance, and in addition 3 allowances have been granted to widows on account of death of husband from accidental injuries received in the line of duty. Of this total, 183 have died, so there are at present 349 former employees receiving retirement allowances, in addition to the 3 dependents. Of the retirants on the roll at present, 123 were retired compulsorily at age 70 or over; 186 were retired upon their request between 60 and 70 years of age; 12 were under age 60 with 35 years of service; 4 were wives retired at the time of retirement of husbands; 19 were retired for ordinary permanent disability, and 4 for permanent accident disability because of injuries received in the line of duty. One beneficiary, an employee aged over 55 when the retirement law was passed, was retired under the special provisions made for such cases. (See p. 34.) The average age of the 349 on the retired list at the close of the fiscal year 1926 is 70.46 years, the range being from 42 to 91 years. Twenty-eight were 80 years or over.

It was not possible to obtain full information regarding the average age and years of service of all who had retired since the plan became effective, but the data for the latest four years covered are given in Table 2:

TABLE 2.—AVERAGE AGE AND YEARS OF SERVICE OF RETIRANTS, 1923 TO 1926

Year ending Nov. 30	Superannuation			Disability			Total		
	Num- ber of cases	Average age	Average years of service	Num- ber of cases	Average age	Average years of service	Num- ber of cases	Average age	Average years of service
1923	44	66.0	26.0	4	55	21.0	48	66.0	26.0
1924	46	67.0	25.0	5	55	20.0	51	65.0	25.0
1925	30	68.0	25.0	5	57	21.0	35	67.0	25.0
1926	32	68.2	24.2	{ 13 12	{ 154 162	{ 24.8 13.0	37	66.5	22.7

¹ Ordinary permanent disability.

² Accidental disability.

Considering first the superannuation retirants it is evident that during these four years there has not been much variation in either the average age at retirement or the average length of service, but that the trend in the two items is in opposite directions; i. e., the average age has increased, while the average length of service has decreased. The average age seems distinctly high. When a retirement system is installed, the first few years are apt to see a disproportionately large number of aged retirants, since those who have grown too old for efficient service are placed upon the pension rolls as soon as possible, and thereafter the average age at retirement tends to be lower. The earliest data shown in this table are for the twelfth year of operation, so that this particular cause would have ceased to affect the figures, and the age at retirement can only be taken to show the tendency of the employees to remain in the service as long as they feel able to do so.

The age of the disability retirants is also high, and the average length of service is considerably in excess of that required before such retirement is permitted.

Allowances and benefits.—The relation between the pay roll of the active force and the amounts paid out in allowances and benefits for the two years 1920 and 1926 is shown in Table 3. Unfortunately it was not possible to obtain the pay-roll data for the year 1913, so for that year the relationship has necessarily been omitted.

TABLE 3.—RELATION BETWEEN PAY ROLL AND PENSIONS, 1920 AND 1926

[The pay-roll figures are as of Nov. 30 of each year, while the benefits are for the calendar year]

Year	Pay roll of active force	Allowances for member beneficiaries			Pension roll for dependents	Total pension roll		
		Superannuation retirement		Disability retirement		Amount	Per cent of active pay roll	
		Amount	Per cent of active pay roll					
1913		\$18,367				\$18,367		
1920	\$13,428,471	66,140	0.49	\$1,774		67,914	0.51	
1926	18,618,904	133,876	.72	8,108	\$1,843	143,827	.77	

It will be noticed that while the amount paid out in allowances and benefits shows a large actual increase, its relative increase has been small, so that after the system has been in operation for 14 years, it forms less than 1 per cent of the pay roll of the active force. The actual increase is perhaps more clearly shown in the statement below, giving the amount paid by the State in pensions each year for the period 1915 to 1926. (The total allowances for these years are, of course, larger, since they include the annuity bought with the members' contributions as well as the pensions.)

Amounts paid for pensions by the State under contributory plan, 1915 to 1926

Year	Amount	Year	Amount
1915	\$30,434	1921	72,342
1916	36,673	1922	83,600
1917	43,944	1923	98,245
1918	49,891	1924	110,348
1919	56,052	1925	120,004
1920	63,159	1926	128,331

This statement shows that the amount paid in pensions in 1926 is more than four times as great as that paid in 1915, and that while the increase has been continuous it has been especially marked within the latest three years.

The total average allowance paid in 1926 was \$414. This item has increased considerably since the first year of operation as shown in Table 4, giving the average and largest retiring allowance paid during each year since the system was installed.

TABLE 4.—AVERAGE AND LARGEST RETIREMENT ALLOWANCE PAID IN SPECIFIED YEARS

Year ending Nov. 30—	Average retirement allowance	Largest retirement allowance	Year ending Nov. 30—	Average retirement allowance	Largest retirement allowance
1913	\$201	\$905	1920	\$334	\$1,200
1914	283	905	1921	355	1,363
1915	285	905	1922	372	1,557
1916	305	1,170	1923	382	1,863
1917	305	1,150	1924	385	1,363
1918	315	1,159	1925	395	1,771
1919	328	1,200	1926	414	1,961

The highest allowances, being individual matters, naturally vary widely from year to year, and while their amount has increased materially, there has been no regular progression. The average allowances, on the other hand, show a slow but continuous increase. With the exception of 1914 there is not a single year in which the average is less than that paid in the preceding year, and only one in which it is not greater.

The dependents are so few that their pensions do not affect the general averages. In 1926 there were but three of these, widows, for whom the average allowance was \$614 and the highest was \$750 a year.

For the period 1923 to 1926 it was possible to obtain in considerable detail facts as to the average final compensation of the retirements and their average annuity, pension, and total allowance. Table 5 shows these data.

TABLE 5.—AVERAGE ANNUITY, PENSION, AND TOTAL RETIREMENT ALLOWANCE, 1923 TO 1926

Year ending Nov. 30—	Number of cases	Average salary last 5 years	Average annuity	Average pension	Average retirement allowance
Superannuation					
1923	44	\$1,415.00	\$65.00	\$411.00	\$476.00
1924	46	1,628.00	75.00	350.00	447.00
1925	30	1,598.00	97.00	362.00	459.00
1926	32	1,766.00	116.95	443.14	560.00
Disability					
1923	4	\$1,528.00	\$50.00	\$260.00	\$310.00
1924	5	1,339.00	37.00	325.00	362.00
1925	5	1,445.00	49.00	348.00	397.00
1926	{ 13 12	1,045.00 1,492.00	28.07 51.70	267.00 605.00	296.00 657.00
Total					
1923	48	\$1,425.00	\$64.00	\$400.00	\$462.00
1924	51	1,492.00	71.00	347.00	419.00
1925	35	1,578.00	90.00	360.00	450.00
1926	37	1,680.00	104.00	432.00	536.00

¹ Ordinary permanent disability.² Accident disability.

As these averages refer to the retirants of a single year, they naturally differ from the averages shown in Table 4, which are based on all the allowances current during a given year. Comparing the tables it will be seen that the average allowance received by the retirants of 1926 was \$536, an increase of 84 per cent over the average allowance, \$291, prevailing in 1913, which, being the first full year of the system's operation, is not much affected by earlier retirements. Disability allowances, however, are included in the total for 1926, while no such allowances were paid before 1914, so a fairer comparison is between the average for 1913 and the average superannuation allowance of 1926. This shows an increase of 92 per cent.

Finances of the System

Table 6 shows the income and expenditures of the system for the first year of operation, for 1920, and for 1926:

TABLE 6.—RECEIPTS AND EXPENDITURES OF MASSACHUSETTS EMPLOYEES' ANNUITY FUND, 1913, 1920, AND 1926

Receipts	1913	1920	1926	Expenditures	1913	1920	1926
From employees-----	\$108,256	\$272,481	\$510,791	Superannuation allowances-----	\$18,367	\$66,140	\$133,876
From State-----	21,935	75,391	141,443	Disability allowances-----	-----	1,774	8,108
All other sources-----	4,080	44,082	132,980	Dependents-----	-----	-----	1,843
Total-----	137,271	391,954	785,214	Total benefits-----	18,367	67,914	143,827
				Refunds-----	7,321	106,716	212,050
				Cost of administration-----	6,649	11,749	12,731
				Total expenses-----	32,337	186,379	398,608

The increase in the contributions from employees is due not only to the increase in the membership of the system, but also to a change in the rate of contribution required. It will be remembered that at first employees were permitted a choice between a contribution of 3 or 5 per cent of the amount of salary subject to contribution, but that, beginning with June, 1918, the 5 per cent rate was made obligatory on all new entrants.

In regard to expenditures, the table shows how the system has been extended since its inception. As first established, it provided only for superannuation retirement. In 1914 allowances for disability retirants were added and in 1921 benefits to dependents of those dying from injuries received in the performance of duty were included.

It will be noticed that the cost of administration is moderate, being in 1926 \$1.46 per capita for the active membership of the system, and amounting to only 1.62 per cent of the total amount paid into the fund.

The total receipts of the system from the time it began operation up to December, 1926, were \$5,770,554, and the total expenditures for the same period \$2,394,595.

Summary of State Systems

COMPARING these three plans with one another and with the three discussed in earlier issues of the Labor Review, it is evident that while they differ in various details there is a considerable resemblance in their outlines.

The Maine and Connecticut systems differ essentially from the others in that they are noncontributory, and a number of differences in detail follow from this fundamental divergence. The others are alike in their main features, varying only in the manner in which these are worked out. All six are intended to apply to all regular and permanent State employees not covered by some other recognized pension plan, a provision which in all these States rules out teachers. In New York special provision is made for bringing in employees of cities, towns, and counties, and Massachusetts includes employees paid partly by the State and partly by counties. Table 7 brings together the main features of all six plans:

TABLE 2.—COMPARISON OF STATE EMPLOYEE RETIREMENT SYSTEMS

Item	Maine	Connecticut	Massachusetts	New York	New Jersey	Pennsylvania
Authorization.	Laws, 1919, ch. 38; 1923, ch. 199; 1925, ch. 118.	Public Acts, 1919, ch. 210; 1921, ch. 74; 1923, ch. 119; 1925, ch. 217.	Acts of 1911, ch. 532; various amendments, now consolidated with original act in ch. 32, General Laws.	Laws of 1920, ch. 741; Laws of 1922, ch. 591; amendments each year since 1920, including 1927.	Public Laws, 1921, ch. 106; amended, Acts of 1923, 1924.	Acts of 1922, No. 331 (P. L. 858); amended, Acts of 1927, No. 56.
by whom administered.	Governor and council.	State board of finance and control.	Board of 3: State treasurer, an employee member elected by his fellows, and a third elected by these 2.	State comptroller.	Board of 5: State treasurer, ex officio; 2 appointed by governor; 2 employee members elected by their fellows.	Board of 5: State secretary and treasurer, ex officio; 1 member appointed by governor, and 2 employees elected by their fellows.
cost of administration borne by.	State.	State.	All regular State employees.	All State employees except teachers. Employees of cities, towns, and counties admitted.	All in classified civil service, unless covered by some other recognized pension system.	All State employees except judges and those covered by school employees' pension system.
gov- erned.	All employees of State institutions or departments.	Permanent and regular employees not covered by some other recognized pension system. Judges and some others excepted.	Age 60 years, with 15 years' continuous service, or after 35 years' service, regardless of age. Compulsory retirement at 70. Ordinary disability retirement: 15 years' service. Disability incurred in performance of duty: No age or service requirements.	Service retirement: Optional at 60, compulsory at 70, except by special exemption. Ordinary disability retirement: 10 consecutive years of service; medical certification. Accident disability: Injury received in service regardless of length of service; medical certification. Discontinued service retirement. (See text.)	Service retirement: Optional at 60, compulsory at 70, except by special exemption. Ordinary disability retirement: 10 consecutive years of service; medical certification. Accident disability incurred in service: No requirements beyond medical certification.	Service retirement: Optional at 60, after 5 years' service. No age for compulsory retirement. Disability retirement: 5 years of service; medical certification.
System noncon- tributory.	25 consecutive years of service with good record.	30 years of service, or 20 if employee has reached age of 70; larger pension for 40 years' service.	From employees: 5 per cent of salary, up to \$1,500. For those employed prior to June, 1918, choice of either 3 or 5 per cent. From State: Monthly contributions to meet cost of pensions for prior and subsequent service, and amounts needed for liability and accident death benefits. State makes up any deficiency.	From employees: Percentage of salary determined by sex, age at entrance, and kind of work. From State: (1) Normal contribution, equal to sum of members' contributions; (2) deficiency contribution; (3) cost of administration. (1) and (2) are percentages of active pay roll, determined annually.	From employees: Percentage of salary based on age at entrance, choice between two rates. From State: (1) Amount equal to sum of members' contributions; (2) contribution to cover prior service; (3) contribution for death benefits and cost of administration.	From employees: Percentage of salary determined by sex, age at entrance, and kind of work. From State: (1) Normal contribution; (2) deficiency contribution; (3) cost of administration. (1) and (2) are percentages of active pay roll, determined annually.

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Retirement allowances.	At discretion of governor and council, but not to exceed one-half average salary for last 5 years of service.	One-half average annual salary for last 5 years; if employee has served 40 years, three-fourths.	Service retirement: For each year of service one-seventeenth of final compensation. Ordinary disability: Nine-tenths of one-seventeenth of final compensation, multiplied by years of service. Ordinary disability: Same as for service retirement. Accident disability: One-half of salary at time of injury.	Service retirement: For each year of service one-seventeenth of final compensation. Ordinary disability: Annuity bought by member's contributions, plus pension from State, not over one-fifth of final compensation. Accident disability: Annuity bought by employee's contributions plus pension from State of three-fourths of final compensation. Discontinued service: Allowance as for service retirement, plus extra pension if employee is 50 or over.	On withdrawal, dismissal, or death contributions are returned with interest at 4 percent, compounded annually.	Options at time of retirement. For death incurred in line of duty, pension to widow or minor children.
Refunds.	None.	None.	In case of withdrawal, dismissal, or death, an employee's contributions are returned with interest at 4 percent, compounded annually.	For dependents of member killed in service, pension of one-half of salary employee received at time of accident. For others, options at time of retirement.	On withdrawal or dismissal member may receive accumulated contributions with compound interest at 4 percent or their actuarial equivalent in annuity or deferred annuity. In case of death, refund is made to estate. Options at time of retirement; no other provision.	Options at time of retirement. For death incurred in line of duty, pension to widow or minor children.
Provision for dependents.	None.	None.	None.	None.	None.	None.

Administration

A comparison of the six systems shows that in the matter of employee representation they are evenly divided. In Maine and Connecticut the management of the plan is intrusted to a State body, and in New York to a State official, the employees having no representation whatever. The Massachusetts, New Jersey, and Pennsylvania systems are administered by boards on which the employees have either one or two representatives, chosen by themselves from their own number.

Conditions for Retirement

Age.—In this respect there have been many changes in the various systems since they were established, but taking them as of the present date, two make no requirements as to age, and four set 60 as the proper age for optional retirement, sometimes coupling with it a service requirement. Maine has only a service requirement, and in general this is true of Connecticut, though here a modification is made in favor of those who reach 70 without the service qualification. New York and New Jersey permit retirement at 60 without regard to service, and Massachusetts and Pennsylvania permit it at the same age with a service requirement.

Maine, Connecticut, and Pennsylvania set no age at which retirement is compulsory, but Massachusetts and New Jersey require it at 70. New York at first did the same, but there was so much complaint against this feature that the law was amended to set the compulsory age at 80, with progressive modifications which will bring it down to 70 by 1936.

Service requirements.—Maine requires 25 consecutive years of service and Connecticut 30, or 20 if the employee has reached 70 with fewer than 30 years of service. Massachusetts requires 15 years of service for retirement at 60, but permits it at any age after 35 years of service. Pennsylvania requires a minimum of 5 years, and New York and New Jersey make no service requirement.

Disability retirements.—Maine and Connecticut make no special provision for disability. The other States permit retirement on allowance for disability after a certain length of service, Massachusetts and New York fixing the term at 15 years, New Jersey at 10, and Pennsylvania at 5. Massachusetts, New York, and New Jersey make a further provision for accident disability, i. e., disability arising from injury received in the direct performance of duty. For such disability, retirement on allowance is permitted without any requirements as to either age or length of service.

All four States require that the fact of disability should be established by medical examination and certification and provide that the retirant must submit to reexamination whenever ordered.

Source of Funds

In Maine and Connecticut the State provides the necessary funds, appropriations being made at the regular sessions of the legislatures, according to estimates furnished. In the other States the funds are secured through contributions from the employees, contributions by the public authorities, interest on investments and money in bank,

occasional profits on investments and the like, the contributions from the employees and the State being the main sources.

Contributions from employees.—In all four States the employee's contribution is made in the form of a percentage of his salary or wage, which is deducted before his salary is paid him. In Massachusetts, for all who entered the service after June 30, 1918, the contribution is 5 per cent of the salary up to \$1,560 a year, all salary over that amount being exempt from contribution. In New York and New Jersey the percentage is determined by the employee's sex, age at entrance, and kind of work, and in Pennsylvania the employee is given a choice between two rates, based on age at entrance, the amount of the retirement allowance being determined by the rate chosen.

Contributions from State.—In Maine and Connecticut appropriations are made as needed for the payment of pensions. In the other systems, the State's contribution is usually divided into several parts, determined by different calculations. One part is needed to provide for the payment of pensions for service currently rendered, another to defray the cost of special benefits, such as the accident disability allowance, and another to pay the allowances for service rendered before the system went into effect. In addition the State, in all these systems, pays the full cost of administration of the plan. In theory the different amounts, except the expense of administration, are calculated either as a percentage of the active pay roll, or as a flat sum which, if continued through a specified period, will extinguish the claim, and the total amount thus found is appropriated regularly. In practice, there is occasionally some irregularity about the appropriations; the State accepts its full responsibility, but sometimes prefers to postpone its payments or part of them.

In addition to these two sources of income, interest upon the accumulated contributions of employees and the State is an important factor in building up the reserves. In 1926 the New Jersey fund received a gross amount of \$61,680 from this source and the New York fund, \$330,290.

Retirement Allowances

Under the Maine law the governor and council have entire discretion as to the amount which may be granted as an allowance, except that it may not be more than one-half the average annual salary received for the last five years of service. In Connecticut the amount is ordinarily one-half of the average annual salary for the last five years of service, but if the retirant has served 40 years it is three-fourths of this average salary.

In the other States the allowance is composed of two parts, an annuity bought by the retirant's accumulated contributions and a pension from the State, which, in the case of service retirement, is equal to the annuity. For those in the service before the system was established, the State provides both pension and annuity to cover the years of prior service, so that the total allowance is the same as if they had been paying contributions from the time they entered the public employ. In Massachusetts the minimum allowance is \$300 a year, and the maximum is one-half of the average annual salary for the last five years of service. If the employee has served so long that his accumulated contributions would purchase an annuity amounting

to more than one-fourth of this final compensation, the State returns the excess to him in a lump sum at the time of retirement. The other States do not set a maximum, but the employee's contributions have been calculated to produce, for those who enter the service at a reasonably early age and remain until they reach the retirement age, a sum which will purchase an annuity approximating one-fourth of the final compensation, so that the total allowance will be around one-half of this compensation.

The allowances for disability and accident disability retirement are usually fixed as a proportion of a normal retirement allowance, the employee's contributions being used to purchase an annuity and the State altering its pension as may be necessary to make the allowance reach the figure set. In the case of accident disability, the State will, if necessary, make up the whole allowance, and in any case its contribution is more liberal than in the case of ordinary disability or service retirement.

Refund of Contributions

As Maine and Connecticut do not require contributions from their employees, the question of refunds does not arise. The other States all return the contributions, with compound interest, upon the death, dismissal, or withdrawal of the employee. Pennsylvania permits a retiring employee, if he prefers, to receive the actuarial equivalent of his accumulated contributions in either an annuity or a deferred annuity.

Provision for Dependents

Maine and Connecticut make no provision for dependents. The other States permit options at the time of retirement by which the retainer may, if he chooses, receive a smaller allowance for himself with some provision for dependents after his death, the nature of the options differing considerably in the various States.

If death occurs from ordinary causes while a member is still in the service, Massachusetts, New Jersey, and Pennsylvania make no provision for the dependents, except as the refund of the accumulated contributions may be looked upon as a provision, but New York, if the decedent has served for at least one year, makes an additional lump-sum payment to his dependents, based upon length of service, but not to exceed one-half of his last year's salary.

If death results from some accident or exposure incurred in the direct performance of duty, Massachusetts, New York, and New Jersey all provide a pension of one-half of the member's final compensation to his widow during widowhood, or to children under a certain age.

Explanation of the New Index of Wholesale Prices

By ETHELBERT STEWART, U. S. COMMISSIONER OF LABOR STATISTICS¹

THIS is the fourth form of a wholesale price index launched by the United States Bureau of Labor Statistics.

In the compilation of the first, in so far as any method was used, it was that of Sauerbeck. The price base had a spread of 10

¹ Address before the New York section of the American Statistical Association, Oct. 27, 1927.

years, being the average of prices from 1890 to 1899. The Sauerbeck system amounts to an index based upon an average of relatives, and the element of weighting as we understand it now is entirely ignored. The less said about that index the better.

It was entirely discarded in 1913, and a new and weighted index was compiled. This was first published in 1914 in Bulletin No. 181. In it a system of weighting the money prices of commodities by their physical quantities sold in the markets was introduced for the first time in the United States, and the aggregative method of computation was employed. The aggregative method had been advocated for a number of years by G. H. Knibbs, of Australia, and was probably first actually put into practice by him. The older indexes, like the bureau's old index, were based either upon the Sauerbeck method, or on other methods more or less kept as secrets.

The 1914 index covered 297 articles or price series. They were weighted by the census data of 1909, and the price base chosen was the average of the prices for the year 1913.

A revision of this index was made in 1921, and the number of commodities was increased to 404. Prices were weighted by the then new 1919 census data instead of the census data of 1909, and the index numbers for all back years were revised accordingly. The base price of 1913 was retained, and at this time the plan was adopted of including in two different commodity groups such articles as properly belong to both groups. Thus structural steel, nails, and certain other metal products used in building were placed in the group of building materials as well as in that of metal products. Similarly, food articles produced on the farm, and which reach the consumer unchanged in form, such as potatoes, eggs, and milk, were included both among farm products and among foods. In computing the general index number for all commodities, however, such articles were counted only once, thereby avoiding duplication in the final results. Again all index numbers were revised back to 1890. These index numbers were continued to August of the present year.

In the bureau's latest revised index numbers, the results of which have recently been announced, the number of commodities has again been increased—this time to 550. This was done in order to give representation to certain commodities, such as automobiles, which now loom up large in the country's commerce but which formerly were unimportant. Other important commodities have been added, such as farm machinery, family sewing machines, cookstoves, by-product coke, manufactured gas, and prepared fertilizers, prices for which have only recently become available to the bureau. All of these articles have been added in the effort to make the bureau's wholesale-price index represent as large a cross section of the country's commerce as it is possible to accomplish under present conditions.

On the other hand, a few articles carried in the index of 1921 have been discarded for the reason that their use has been superseded by other types of commodities. A striking instance of this is clay worsted, which is no longer used to any appreciable extent in the manufacture of men's clothing.

Distribution of the articles or price series among the various groups under the revisions of the bureau's index number is as follows:

NUMBER OF ARTICLES OR PRICE SERIES IN EACH COMMODITY GROUP IN
UNITED STATES BUREAU OF LABOR STATISTICS' INDEX NUMBERS OF 1913, 1921,
AND 1927

Commodity group	1913	Revision of—	
		1921	1927
Farm products	30	56	67
Foods	87	111	121
Cloths and clothing	72	65	
Hides and leather products			40
Textile products			75
Fuel and lighting	15	20	23
Metals and metal products	25	37	73
Building materials	30	41	57
Chemicals and drugs	10	43	78
House-furnishing goods	6	31	37
Miscellaneous	22	25	25
Total	297	404	550

The new index uses as a weighting factor the average of the censuses of 1923 and 1925 for manufactured products, and for agricultural products the averages of 1923, 1924, and 1925. Wherever reliable data could be secured for the mid-census year of 1924 these were used in the adjustment of the weighting factor. In the matter of agriculture I think we must concede that the variation in volume of crops is so great that a somewhat broader base for the weighting factor is desirable. Having accepted the broader time base for the weighting factor of agricultural products, I accepted in the interest of uniformity a broader time base for the weighting factor of all commodities. The price base has been changed from the average of 1913 to the average of 1926. The principle of an average for one year as the price-base line has not been abandoned.

Some rearrangement of commodities has been made with respect to certain groups. Thus hides, which now are almost entirely a packing-house output, have been removed from the farm-products group and assigned to the newly added group of hides and leather products. To this group also belong shoes, formerly with cloths and clothing, and leather, formerly in the miscellaneous group. The new group of textile products includes all of the former cloths and clothing group with the exception of shoes; also, it includes manila hemp, jute, rope, and Mexican sisal, formerly carried in the miscellaneous group. It also includes two new commodities—binder twine and burlap.

For a number of commodities composite prices are now being used, instead of prices from a single source. This applies to leather harness, suitcases, and traveling bags, anthracite and bituminous coal, manufactured gas, plows, automobiles, sewing machines, cookstoves, brick, Portland cement, prepared fertilizers, furniture, and automobile tires. In all cases simple averages of the prices obtained from different sources have been made in order to arrive at the composite prices. To preserve the continuity of the information, care is taken that the quotations for any month be obtained from the same sources and on articles of the same description as the month before. These composite prices are believed to furnish a more accurate barometer of price changes than would prices based on a single source of information. For example, monthly prices of building bricks are obtained from 82 manufacturers in different parts of the

¹ Includes certain commodities classified also in another group.

country. These 82 prices are averaged to obtain the composite price. No attempt is made to weight the different elements entering into any composite price, since in most cases it would be a physical impossibility to arrive at the quantity of the article sold at the reported price. In a few instances, where the reported prices were regarded as truly representative, the composite price has been made from only three quotations, but in no case from less than three. In all cases the prices, whether individual or composite, have been weighted by the quantities of the article marketed in the three years 1923, 1924, and 1925, or in the case of manufactured products, by the average for 1923 and 1925.

In addition to the simple composite price we have, as in the case of automobiles and several other commodities, what might be considered a weighted composite price. We carry six automobiles—Ford, Chevrolet, Dodge, Buick, Cadillac, and Packard. We get the price of each type of Ford passenger car sold in a month, for example. From this we make an unweighted average price, since it has been found impossible in practice to ascertain the volume of sales for each type of car. We do this for each of the six makes. Then, to get the composite price used in the weighted index, we proceed as follows: The total production of all makes of passenger cars in the base weighting period 1923–1925 is divided into six parts according to the relative volume of sales in 1926 of the six makes as compared with each other. In other words, the six makes are taken as representing all makes of cars. Then we weight the average price of each of the six makes by its proper figure and add the results. The weighted composite prices or aggregates are then resolved into index numbers in the usual manner. There are other instances in which this weighted composite occurs, but they need not be discussed here. It must be understood that in the case of automobiles we have the advantage of knowing with practical accuracy the number of each make of car placed on the market each year.

In Bulletin No. 453, already issued, we have published the list of 50 articles classified by their various groups. We have also published the weights used for each.

Aside from the general and clear-cut presentation of the index numbers by groups and by all commodities there will be other presentations. For instance, we will show an index of farm products as against nonagricultural products. However, our farm-products group will be farm products just as they come from the farm, and will not include any manufactures. For instance, fluid milk is sold by the farmer and as such is a farm product. However, we have taken the position that if the farmer changes his milk into cheese he is to that extent a cheese manufacturer, and cheese will be listed as a manufactured product.

There will be another index divided into three groups—raw materials, semimanufactured articles, and finished products. Here again there is an entire reclassification of raw materials, and the group will contain raw materials as we understand the term; that is, raw material as it is produced in its natural state. For instance, it will contain iron ore but it will not contain pig iron. When it comes to what to include in the semimanufactured group the classification will have to be more or less arbitrary. To a lesser degree this applies to the finished products also.

In the nature of things the sampling method must still control. Even though we were able to increase by fivefold the number of articles which we include, it would still be a sampling method. However, to give you an idea of the size of the sample, the total value of the bureau's 550 selected articles for 1925 was \$45,309,236,000 whereas the total of all goods entering into the market for 1925 was approximately \$84,000,000,000. In other words, the bureau's sample is over 50 per cent of the total value of all commodities of whatsoever nature entering into the markets of the United States. Of course we do not include as commodities either real estate, buildings, stocks and bonds, or a number of other things which will readily suggest themselves to your minds.

If we take the groups, however, our sample is relatively very much larger. The bureau's farm-products group, on 1925 prices, has a value of \$10,339,794,000. This is larger than the value shown by the Department of Agriculture for crops. The reason for this is that the Agricultural Department's figures are for crops only and exclude livestock sold for food, while the bureau's farm-products group includes such livestock. Our foods group exceeds the census figure for the chief food industries by some \$700,000,000; however, this is accounted for largely by the fact that our prices are sale prices while the census figures are production values—practically, cost of production. Our fuel and lighting exceeds the figure given by the Bureau of Mines and the census, but here again the Bureau of Mines quotes f. o. b. mine values of coal, while the Bureau of Labor Statistics figure is the sale value in the primary markets. Resales are eliminated by the Bureau of Labor Statistics as far as possible.

For the 550 articles which we carry, the term "sampling method" hardly applies, because our weights are assumed to be those of the total amounts marketed; and how nearly this proves to be true is shown by the fact that our total for 1925 is \$45,309,236,000, whereas the census and other sources of information from which we get our weights show a corresponding total of approximately \$46,500,000,000. So you see that so far as the 550 articles we carry are concerned, the sample is almost 100 per cent.

One other point of interest is the percentage that each group bears to the whole. In this connection let me say that the relative importance of commodity groups as measured by wholesale values in exchange for the price-base year 1926 is as follows:

	Per cent
Farm products-----	21.11
Foods-----	22.38
(This does not include articles classed as farm products.)	
Hides and leather products-----	3.63
Textile products-----	8.56
Fuel and lighting-----	16.07
Metals and metal products-----	13.08
Building materials-----	5.15
(This does not include such articles as are included in metals and metal products—structural steel, for instance.)	
Chemicals and drugs-----	1.75
(Here again this does not include such articles as are classed as foods.)	
House-furnishing goods-----	1.92
(Here again this does not include articles classed as textile or metal products.)	
Miscellaneous-----	6.35
(The rather high percentage of the total of this group is caused partly by the introduction of automobile tires.)	

To those who desire this percentage distribution in more detail there is attached a table showing such distribution not only by groups but by subdivisions forming the groups.

RELATIVE IMPORTANCE OF COMMODITY GROUPS AS MEASURED BY WHOLESALE VALUES IN EXCHANGE, 1926

Group	Estimated value in exchange	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
1. Farm products	\$9,413,212,000	100.00	21.11
a. Grains	1,603,106,000	17.04	3.60
b. Livestock and poultry	3,199,079,000	33.98	7.17
c. Other farm products	4,611,027,000	48.98	10.34
2. Foods	12,627,157,000	100.00	122.38
a. Butter, cheese, and milk	2,389,150,000	18.92	12.51
b. Meats	4,149,125,000	32.86	9.31
c. Other foods	6,088,882,000	48.22	10.56
3. Hides and leather products	1,617,944,000	100.00	3.63
a. Hides and skins	343,845,000	21.25	.77
b. Leather	369,739,000	22.85	.83
c. Boots and shoes	785,328,000	48.54	1.76
d. Other leather products	119,032,000	7.36	.27
4. Textile products	3,817,298,000	100.00	8.56
a. Cotton goods	1,523,849,000	39.92	3.42
b. Silk and rayon	684,210,000	17.92	1.53
c. Woolen and worsted goods	1,105,911,000	28.97	2.48
d. Other textile products	503,328,000	13.19	1.13
5. Fuel and lighting	7,163,607,000	100.00	16.07
a. Anthracite coal	888,141,000	12.40	1.39
b. Bituminous coal	2,157,740,000	30.12	4.84
c. Coke	407,722,000	5.69	.92
d. Manufactured gas	368,717,000	5.15	.83
e. Petroleum products	3,341,287,000	46.64	7.49
6. Metals and metal products	5,832,921,000	100.00	13.08
a. Iron and steel	2,128,331,000	36.49	4.77
b. Nonferrous metals	935,332,000	16.03	2.10
c. Agricultural implements	93,652,000	1.61	.21
d. Automobiles	2,388,248,000	40.94	5.36
e. Other metal products	287,358,000	4.93	.64
7. Building materials	2,836,860,000	100.00	5.15
a. Lumber	1,156,615,000	40.77	2.59
b. Brick	235,154,000	8.29	.53
c. Cement, Portland	260,803,000	9.19	.59
d. Steel, structural	148,868,000	5.25	(1)
e. Paint materials	289,864,000	10.22	.65
f. Other building materials	745,556,000	26.28	.79
8. Chemicals and drugs	862,613,000	100.00	4.75
a. Chemicals	476,782,000	55.28	4.89
b. Drugs and pharmaceuticals	117,068,000	13.57	.26
c. Fertilizer materials	145,045,000	16.81	.32
d. Fertilizers, mixed	123,718,000	14.34	.28
9. House-furnishing goods	1,446,819,000	100.00	5.92
a. Furniture	533,202,000	36.85	1.20
b. Furnishings	913,617,000	63.15	5.72
10. Miscellaneous	2,829,551,000	100.00	6.35
a. Cattle feed	189,980,000	6.71	.43
b. Paper and pulp	759,383,000	26.84	1.70
c. Rubber, crude	356,630,000	12.61	.80
d. Automobile tires	764,955,000	27.03	1.72
e. Other miscellaneous	758,603,000	26.81	1.70
All commodities	44,582,074,000	-----	100.00

¹ Not including articles classed as farm products.

² Not including articles classed as metal products.

³ Included in metals and metal products.

⁴ Not including articles classed as foods.

⁵ Not including articles classed as textile products or metal products.

It should be noted that the present plan is not only to add to the index new commodities as they appear but to reweight with each succeeding census; that is to say, the fixed weighting period has been

entirely abandoned both in theory and in practice, and the weights will be revised with each census period; the price-base line, however, will be continued until, like 1913, it has outlived its usefulness. It should be further noted that in carrying this index back to 1913 variable weighting factors will be used, to tally as nearly as possible with the quantity entering into the markets of the country in each particular year. For instance, we are not going to carry the automobile weights of 1926 back to 1913, but those weights will be graduated downward to conform to the number of passenger cars actually produced in each census period. This method will be applied to all items as far as possible.

INDUSTRIAL RELATIONS AND LABOR CONDITIONS

Sixteenth Annual Safety Congress, Chicago, September
26-30, 1927

FOR the first time in many years since the safety movement has achieved national importance through the activities of the National Safety Council, which was organized in 1912, the sessions of its annual congress were held under one roof when the sixteenth congress assembled at the Hotel Stevens, Chicago, during the week of September 26-30, 1927.

While at this writing a final report of registration of delegates is not available, the council estimates that fully 6,000 representatives of all branches of industry, of National, State, and municipal governments, of educational and health interests, and of insurance companies and engineering societies, attended the 104 general and sectional meetings, luncheons, banquets, and breakfast gatherings, where more than 300 speakers discussed safety and accident prevention in all its phases.

Resolutions on Public Safety

PARTICULAR attention was given to safety on the streets and in the homes, and at one of the general meetings the congress adopted a series of resolutions indicating its attitude on the subject of safety on the streets, highways, and other public places and in residences. These resolutions are as follows:

Whereas in the United States last year some 90,000 persons were killed and an inestimable number were injured by accident on the streets, highways, and other public places, at home, and in the industries, causing pain, sorrow, deprivation, and an economic loss of billions of dollars; and

Whereas a majority of these accidents could have been prevented, as was demonstrated by the thousands which have been prevented through united effort of those intent upon accident prevention; and

Whereas public officials and leaders of public opinion have become increasingly alarmed over the traffic accident problem in particular and have very properly determined that this wastage of life must stop: Therefore be it

Resolved, That the members of the national council and others greatly interested assembled in Chicago at the Sixteenth Annual Safety Congress, pledge themselves to continue diligent and ever increasing efforts to prevent accidents and to further and make effective these efforts, recommend to the States and cities, the schools, civic organizations, and all citizens the following:

1. Adoption of the standard accident reporting system in every State and city so that effective preventive measures may be based on accurate information.

2. A scientific, nonpartisan study of the traffic situation in each city; the improvement of streets, revision of ordinances and regulations, and adoption of traffic-control measures as shown necessary by such surveys.

3. Universal acceptance of the principle of uniformity in State and city traffic laws and regulations and in the design and use of signs, signals, and pavement markings, for both safety and convenience, and the generous cooperation of all interested officials and organizations to that end.

4. The licensing of all drivers, under State law, in such manner as will eliminate as far as possible the unfit and the irresponsible.
5. The unstinted recognition by all users of the highways, both motorists and pedestrians, of the rights, the safety, and the comfort of all other users.
6. The safety instruction and training of all school children, and, to that end, the furnishing of necessary safety information and materials to all teachers.
7. The continued cooperation of newspapers and periodicals, as well as of all civic organizations, in giving the widest publicity to the consequences of accidents, to the specific means of avoiding accidents, and to the vital need for personal caution and law observance.
8. The impartial and certain enforcement of reasonable laws on that small minority of the population who can not otherwise be brought to realize the rights of others.
9. The promotion and the coordination of all these measures through the formation in each community of a community safety council or committee, nonpartisan, noncommercial, representing all groups and interests, mobilizing the forces of public opinion and supporting the public officials in the loyal and efficient performance of their duties.

Resolutions on Industrial Safety

THE same session also adopted the following resolutions pertaining to industrial safety:

Whereas some 24,000 workers were killed and hundreds of thousands were injured in industry during 1926, causing pain, sorrow, destitution, interruption of orderly processes, slowing up of production, and the economic loss of billions of dollars imposed upon employers and employees; and

Whereas more than 4,300 employers, members of the National Safety Council, have demonstrated that most accidents can be prevented through organized prevention work; and

Whereas it has been demonstrated by members of the National Safety Council that this achievement is possible in all fields of industrial endeavor if all employers and employees will realize that accident prevention is a responsibility which should be shouldered by everyone: Therefore be it

Resolved, That the members of the National Safety Council and others deeply concerned, assembled in Chicago, Ill., at the Sixteenth Annual Safety Congress, urgently recommend the following:

1. That all employers make a survey of their respective establishments, both large and small, to ascertain the why, where, and how of accidents and accident prevention.
2. That employers keep and analyze their accident records for the purpose of devising ways and means of preventing the recurrence of accidents.
3. That employers safeguard, in so far as possible, all mechanical equipment and revise manufacturing processes so as to eliminate these hazards.
4. That the personnel of all establishments be impressed with their individual need of safety and with the necessity of properly instructing their fellow-workers in safe practices.
5. That employers support efforts being made by community safety councils, the National Safety Council, Federal, State, and municipal officials and others, by conducting necessary organized accident prevention campaigns.
6. That employers encourage the inclusion of safety education in the courses of public, private, and parochial schools and colleges.
7. That more colleges and universities incorporate safety engineering in existing engineering courses.

Report on Hazards of Spray Coating

A FEATURE of some importance was the submission of a report by the special committee appointed by the council to make a study of the hazards incident to the spray method of applying paints and lacquers on inside work. Considerable discussion followed the reading of the majority report by Dr. C.-E. A. Winslow, of Yale University, at the final session of the chemical section, and with but

a few dissenting votes it was adopted. The committee found the process quite hazardous, chiefly from the use of lead, benzol, and silicon, and recommended certain measures covering the wearing of masks, the installation of efficient exhaust systems, and methods of preventing fires in the case of benzol. It appears, however, that a substitute for benzol—a nonpoisonous toluol—has removed much of the dangers to workers arising from the use of benzol. A minority report, to be included with the majority report—both of which will be published later and can not therefore be reviewed in detail at this time—claims that the committee has unduly exaggerated the hazards of the spray process.

Election of Officers

THE following are the officers of the National Safety Council for the ensuing year:

President.—Homer E. Niesz.
Vice president for industrial safety.—E. W. Beck.
Vice president for local councils.—C. E. Hill.
Vice president for public relations.—C. J. Moore.
Vice president for public safety.—Miller McClintock.
Vice president for finance.—C. E. Pettibone.
Vice president for membership.—Henry A. Reninger.
Vice president for engineering.—G. E. Sanford.
Vice president for education.—A. W. Whitney.
Vice president for health.—Dr. C. E. A. Winslow.
Treasurer.—G. T. Hellmuth.
Managing director.—W. H. Cameron.

The 1928 Congress

THE congress considered a resolution to the effect that the next session and all subsequent sessions should be held in Chicago, but no definite action was taken, the matter being in the hands of the executive committee.

Migration of Population to and from Farms

THE Bureau of Agricultural Economics of the United States Department of Agriculture has just issued, in mimeographed form, an "Analysis of migration of population to and from farms." The study was conducted in the summers of 1926 and 1927 by means of circular letters and covered 2,745 farm operators who migrated from farms to city, town, or village and 1,167 persons who left city, town, or village for the farm.

Migration from Farms

THE 2,745 former farm operators were scattered through every State in the Union, and included 2,307 farm owners and 438 tenants, hired men being excluded. It is not claimed that this particular sample of farmers is typical of all those who have given up farming, but "there seems no reason to disregard or even to minimize the facts revealed in this investigation as types of causes and

conditions playing a part in the general recent movement of farmers off the land."

Of the reasons given for leaving the farm, 37.8 per cent were of an economic character, as, for example, high prices, high taxes, and not being able to make ends meet. The next most prevalent set of reasons (25.2 per cent) included physical disability, old age, and inability to obtain enough help to carry on the farm and household work; 12 per cent of the owners' reasons and 5.6 per cent of the tenants' reasons were the lack of opportunity for schooling their children; 1.8 per cent left the farm to allow a son or son-in-law to occupy it; 2.5 per cent (76 owners and 3 tenants) had obtained a competency which permitted them to "lead an easier life" and to obtain those things which "the family has long craved but has not had opportunity to obtain."

The present occupations of these former farmers cover a wide range: 25.3 per cent are working at day labor or at trades, etc.; others are salesmen (6.9 per cent), public servants (6 per cent), merchants or grocers (4.9 per cent), employees of garages or service stations (2.6 per cent), teachers, preachers, etc. (2.2 per cent), dealers in feed, coal, etc. (2.1 per cent), and real estate agents (1.1 per cent), other occupations accounting for 25.6 per cent, while 23.3 per cent reported no present occupation.

Not all of those leaving their farms disposed of them, and 22 per cent reported that 70 per cent or more of their present income was derived from farms they still owned, 9.3 per cent were receiving from 50 to 59 per cent of their income from their farms, and 7.8 per cent were receiving from 20 to 29 per cent.

Migration to Farms

CIRCULAR letters were sent to 10,000 persons who had recently moved from cities, towns, or villages to farms but only 1,167 replies were received. Every State, with the exception of Arizona, Delaware, and New Mexico, was represented in the replies.

The purpose of the inquiry was to throw some light upon the character of the constant stream of migration from urban areas to farming communities. The outstanding reasons given by migrants who became farm owners and tenants were "health," "better living conditions," "better place to bring up children," and "love of nature and country life." The reasons given by those who became hired men included the high cost of living in cities and better opportunity for making money on farms, although some of them were influenced by the same motives that actuated those who became farm owners and tenants. Many of the migrants had tired of city life and others (6.6 per cent) wanted to live more independently.

The total number of those included in this part of the study who became owners of farms was 776; whereas 344 became tenants, and 47, hired men. Out of 1,166 persons who answered the question as to their previous experience on farms, only 155 had never worked on farms. More than one-third of those reporting previous farm experience had owned farms and one-third had been tenants.

The majority of the migrants said that they liked farming better than city work and considered it a good occupation; 54.3 per cent of a total of 1,098 reported that they made a better living on the farm

than they had in the city. Of the farm owners, 47.4 per cent reported a better living on the farm; of the tenants, 66.9 per cent; and of the hired men, 73.3 per cent. The incomes of 6.3 per cent were about the same as in the city, 4.3 per cent had not been on the farm long enough to answer this question, and 2.1 per cent reported that the farms were not yet on a good paying basis but they expected to make them pay. About 3 per cent were not dependent upon the farms for a living.

Cooperation of Employers and Workers in England

WHILE in general the events of the last two years in English industrial history have tended to increase antagonism between employer and employed, there have been indications of late of the development of a different spirit. Organized labor, as a whole, has made a distinct gesture of peace, and individual attempts at cooperative effort made by employers have been cordially received. The overture of organized labor was probably the most far-reaching in its possible consequences, but, unfortunately, it has apparently not met with a response from organized industry. Of the employers' efforts two—the plan of the Chemical Combine and the conference scheme of the London, Midlands & Scottish Railway—are attracting considerable attention.

Overture of Organized Labor¹

THE first step toward general cooperation in industry was taken at the trade-union congress held at Edinburgh in the beginning of September of this year, in a report by the general council, which concluded:

The extent to which the confederation of employers' organizations controls questions of general policy * * * points to the necessity for centralized negotiations to deal with general questions for the whole movement. The general council therefore recommends that this necessary coordination should be in the hands of the trade-union congress through the medium of the general council.

The president in his opening address spoke more plainly of what the general council had in mind. Discussing the constructive period of trade-unionism, he went on to say:

Much fuller use can be made * * * of the machinery for joint consultation and negotiation between employers and employed. * * * Practically nothing has yet been done to establish effective machinery of joint conference between the representative organizations entitled to speak for industry as a whole. There are many problems upon which joint discussion would prove of value at the present time.

Such a direct exchange of practical views between the representatives of the great organized bodies who have responsibility for the conduct of industry and know its problems at first hand would be of far greater significance than the suggestion which has been made in certain quarters for a spectacular national conference, under Government or other auspices, to discuss a vague aspiration toward "industrial peace." Discussion on these lines would bring both sides face to face with the hard realities of the present economic situation, and might yield useful results in showing how far and upon what terms cooperation is possible in a common endeavor to raise the workers' standard of life.

¹ Data from the Manchester Guardian, Oct. 21, 1927, p. 11, and Labor Magazine, October, 1927, pp. 246, 247.

The policy thus suggested received further discussion during the meeting, and while one element opposed it as a surrender to the employing side, the prevailing sentiment favored it. One trade-union leader thus sums up the attitude of the congress:

The trade-unions felt themselves able to render a positive contribution to the solution of the problem of industrial relations, and were ready to enter into discussions with any representative body which could speak for the employers as a whole on the possibility of evolving more efficient methods of conducting industry and improving the standards of employment. * * * [They indorse] a policy which aims at using the organized power of the workers to promote effective cooperation in developing more efficient, less wasteful methods of production, eliminating unnecessary friction and avoidable conflict, in order to increase wealth production and provide a steadily rising standard of social life and continuously improving conditions of employment for the workers.

It was rather generally considered that this policy marked an important development, but while the unions' attitude was commended, the employers as a body took no notice of the proposal. More than a month after the adjournment of the congress its secretary publicly called attention to the lack of a reply from the employers, and asked whether there were no body competent to deal with such a proposition without the risk of being accused of exceeding its powers. Late in October the National Confederation of Employers' Associations passed a resolution dealing with the proposal. This body is the central organ on the labor relations side of the employers' federations of the country, and represents federations in industries employing 7,000,000 workpeople. The resolution welcomed and indorsed the sentiments and principles expressed at the Edinburgh meeting but failed to give any approval to the kind of cooperation which the unions had suggested.

It is in the individual works that that spirit of mutual understanding must find its ultimate expression in practical results. The methods for attaining these results must vary from industry to industry according to the problems which the particular industry has to face, and the confederation would therefore wish to record its view that it is in the individual industries—in their organizations and in the day-to-day contact in the works—that the most ready and effective means present themselves for developing and applying the spirit of industrial good will which is so vital to the future welfare of this country and which the confederation will at all times be anxious to further and support.

This response is generally taken as meaning that the confederation is unwilling to enter into the organized cooperation suggested by the unions, and disappointment is expressed over what is regarded as a rebuff to a gesture of hopeful significance. It is pointed out that the unions' idea was to deal with questions too far-reaching to be solved within any single industry, and with broad principles of general application. Such questions as unemployment, for instance, the relation of the sheltered¹ and unsheltered trades, the international convention for an 8-hour day, and the like, can not be handled effectively within a single industry, much less within the single establishment. At the same time, the resolution of the confederation does not formally declare against organized cooperation, and further developments are possible.

¹Sheltered trades are those not subject to foreign competition.

Cooperation in the Chemical Combine

A PLAN designed to promote a better spirit of cooperation between employer and employed has recently been announced by Sir Alfred Mond, head of the merger of chemical industries, employing approximately 40,000 workers. The London Economist, in its issue for October 15, 1927, contains a discussion of this plan, from which the following description is summarized. Its most important features are thus given:

There are four features to the plan as outlined upon which emphasis may be laid. These are: (1) The establishment of a central labor department; (2) the creation of a system of interlocking works councils; (3) the institution of a "staff grade" among the employees of the concern; (4) the initiation of an employees' share purchasing scheme.

The central labor department, in charge of one of the executive officers, with a staff of experts and an advisory committee chosen from those whose business it is to administer the labor policy in the various works, is to deal exclusively with questions affecting the relations between the company and its workers. Its general purpose is to afford a substitute for the personal touch which is disappearing with the small-scale business.

The system of works councils is to begin with a local council for each of the separate works, meeting monthly. The group of works belonging to each constituent company of the merger is to have its own group council, and a central council, representative of the management and the workers, is to meet from time to time in London under the chairmanship of Sir Alfred Mond. These councils afford the opportunity for bringing up any matter for discussion, and the meetings will permit the management "to inform the workers on such questions as the output and program of the worker and general matters affecting the industry." No details are at hand as to how the workers' representatives in these councils are to be chosen, nor as to whether they will have any voice in deciding the questions brought up for discussion at the meetings.

The third feature has elements of novelty. After a service of five years, workers may be promoted to a staff grade, giving them a status approximating that of salaried employees.

It is suggested that up to 50 per cent of those eligible by length of service may be promoted to this grade. Their privileges are to include the payment of a weekly wage (instead of an hourly rate), a month's notice of termination of employment, and the payment of full wages (less national health insurance benefit) for all certified sick absence up to six months in a year.

The workers' share-holding scheme involves a permanent offer of common stock in the Imperial Chemicals to the workers at 2s. 6d. below the mean market price. Further shares in proportion to the number purchased will be given free to the worker-purchaser, the number of free shares depending upon the wage or salary drawn. Shares may be paid for by installments spread over two years, and, should a worker die before completing his payments, the company will take over his obligations and hand over the shares, fully paid for, to his next of kin. The number of shares which may be purchased is limited, and precautions are taken to prevent speculation.

Railway Cooperation

WHILE all the features of the above scheme are intended to develop cordial relations between employer and employed, the extent to which the intelligence of the workers will be actually brought to bear upon the problems of the industry will probably depend very largely upon how the works councils are handled. One of the prominent railways of the country is developing a plan which, by way of contrast, is primarily based upon the idea of enlisting the worker's intelligence directly in the campaign for improving the service and reducing expenses. Another contrast is found in the fact that it does not involve setting up any new machinery, but only an extension of the field to which an existing system may be applied.

In May of this year Sir Josiah Stamp, head of the London, Midland & Scottish Railway, issued an appeal to the road's employees for help in improving conditions, asking especially for suggestions as to definite matters which might be altered for the better. In August he followed this up with a circular proposing more definite and formal cooperation through the local and district councils already established for the discussion of questions of wages and conditions of employment. In this circular Sir Josiah speaks very plainly of the road's losses through the general business depression, the competition of motor vehicles, etc., and urges that the employees join with the management in trying to improve the situation for their common benefit.³

I am sure we can make greater and more profitable use of our established conciliation machinery for the purpose not only of defending our legitimate railway business but of materially adding to it. * * *

For the purpose of furthering the ideas I have been expressing, instructions are being given for meetings with your representatives to be arranged as early as convenient. The company's officers will enter on the agenda of subjects for consideration at those meetings a number of matters such as those I have referred to in this letter, including, for example, the various aspects of road motor competition; the cost of operating—in running, handling, cartage, etc.; shunting operations as they affect speedy transit, damage to rolling stock, etc.; accidents to staff, and methods of prevention. Facts and figures relating to these subjects will be given. I hope the staff representatives will cooperate by adding to that list such questions of common interest as they think can helpfully be talked about, and that the discussions will aid in establishing that cooperative effort by which progress can surely be won.

The railway men responded cordially to this appeal, and in the preliminary conferences which have so far been held a number of resolutions have been passed indorsing the plan and calling on all railway men to give full support. J. H. Thomas, head of the National Union of Railwaymen, issued a public statement on the matter:⁴

I advise all those concerned to show a keen interest in this matter and to offer every possible help and assistance to the officers of the companies in endeavoring to establish a prosperous and efficient railway service. Such cooperation is common sense, because railway men depend upon the railway industry for their livelihood, and it is not inconsistent with sound trade-union principles.

As yet only preliminary meetings have been held, so that it is too soon to say anything about the success of this plan. It is evident, however, that it is a deliberate attempt to enlist the intelligence of the workers, to make them feel themselves a responsible part of the management of the industry, and that as such it has roused among them a cordial response.

³ Railway Review, Aug. 26, 1927, p. 1.

⁴ Idem, p. 8.

Increased Labor Productivity in Large Steel Plant Between 1902 and 1926

DETAILED figures showing the great increase in the productivity of labor in the iron and steel industry in recent years were cited by Mr. Theodore W. Robinson, of the Illinois Steel Co., in an address before the Iron and Steel Institute of London, England, in September, 1927. Mr. Robinson presented data giving the output in tons per man-hour in certain large departments of the Illinois Steel Co. for the years 1902 and 1926. The figures are as follows:

TONS PRODUCED PER MAN-HOUR IN SPECIFIED DEPARTMENTS OF A LARGE STEEL MILL, 1902 AND 1926, AND PER CENT OF INCREASE

Department	1902	1926	Per cent of in- crease, 1926 over 1902
Ore unloading	2.087	16.835	706.7
Blast furnaces	.185	.698	277.3
Bessemer ingots	.421	.841	99.8
All open-hearth ingots	.252	.418	66.0
Rail mill:			
South Works, 1902	.189		
Gary Works, 1926		.416	}
			120.1

Commenting on these figures, Mr. Robinson said:

This table shows that the average man in a modern iron and steel plant is producing from one and a half to eight times as much as he did 25 years ago. If translated into yearly volume, these figures indicate that at South Chicago the average workman has increased his ore-handling capacity since 1902 from 6,000 to 48,000 tons, his pig-iron output from 675 to 2,405 tons, his Bessemer ingot production from 1,761 to 3,730 tons, his open-hearth ingot production from 1,049 to 1,842 tons, and his rolling capacity from 603 to 1,240 tons of rails.

Output, Costs, and Proceeds of the Coal-Mining Industry in England

THE mines department has recently issued a summary statement of the output, costs of production, proceeds, and profits of the coal-mining industry for the three months ending March 31, 1927, which has received considerable notice in the English press. The Ministry of Labor Gazette, in its issue for October, 1927, quotes from it figures showing that at mines which produce about 96 per cent of the total output, 58,222,345 tons of commercially disposable coal were raised during the quarter.

The net costs, after deducting the proceeds of miners' coal, amounted to £47,042,504,¹ equivalent to 16s. 1.92d. per ton. The proceeds of commercial disposals amounted to £50,539,967, equivalent to 17s. 4.33d. a ton. There was thus a credit balance of £3,497,463, or 1s. 2.41d. per ton. An analysis by districts shows that the credit balance ranged from 2.58d. in Scotland to 5s. 1.48d. in South Derbyshire, Leicestershire, Cannock Chase, and Warwickshire. In South Wales and Monmouthshire, for which districts the details relate to February, March, and April, there was a debit balance of 4.88d. per ton.

¹At par, pound=\$4.8665; shilling=24.33 cents; penny=2.03 cents. Exchange rate about par.

The following table gives some of the more important facts for the first quarter of four consecutive years:

OUTPUT, COSTS, AND PROCEEDS OF THE COAL-MINING INDUSTRY, FIRST QUARTER OF 1924, 1925, 1926, AND 1927

[At par shilling=24.33 cents; penny=2.08 cents. Exchange rate about par]

Period	Per cent of industry covered	Amount of salable coal raised	Credit (+) or debit (-) balance per ton	Number of work-people employed	Output per man-shift worked	Earnings per man-shift worked
		Tons	s. d.		Cwt.	s. d.
First quarter, 1924.....	94	67,047,657	+2 9.63	1,111,280	17.79	10 2.82
First quarter, 1925.....	94	62,458,808	+0 6.13	1,074,079	17.98	10 7.58
First quarter, 1926.....	99	66,071,166	+1 4.99	1,074,395	18.46	10 4.79
First quarter, 1927.....	96	63,329,641	+1 2.41	960,943	20.66	10 7.12

It will be noticed that since 1924 the number of workers employed has decreased materially, the output per man-shift worked has increased, and the earnings per man-shift worked have varied by only a few pence. These average earnings for 1927, it is explained, range from 8s. 8.41d. in Northumberland to 13s. 2.06d. in North Derbyshire and Nottinghamshire. "These earnings do not include the value of allowances in kind."

In commenting upon this report, the London Economist (October 22, 1927, p. 689) gives a gloomy summing up of the general situation. The credit balance of 1s. 2d. per ton for the first quarter of this year, it points out, covers wide variations, not only as between different mines but as between whole districts.

Whereas South Derbyshire and its linked areas record a profit of 5s. 1.5d., North Derby and Notts 2s. 4.5d., and Yorkshire 2s. per ton, the areas relying mainly on exports fared very differently, Northumberland showing a profit of under 10d., Durham a profit of less than 4d., and South Wales a loss of nearly 5d. per ton. Moreover, in the case of Durham, whereas proceeds per ton in the March quarter averaged 15s. 1.5d. per ton, against net costs of 14s. 10d., the joint ascertainment for the month of August is reported to have disclosed a figure of approximately 12s. as average proceeds per ton sold. Throughout 1927 the prices realized for exported coal have steadily fallen—from an average of 21s. in January to 16s. 11d. in September.

To show that this policy of cutting prices on export coal has not been successful in regaining the foreign markets, the Economist gives figures showing that from January to September, inclusive, of 1925, the average monthly exports were 4,163,000 tons, at an average value f. o. b. per ton of 20s. 5d., while for the same period of the present year the average monthly exports have been 4,333,000 tons, at an average value f. o. b. of 18s. 3d. For September, 1927, the average value f. o. b. was 16s. 11d.

It will be seen that, comparing this year with the depression in 1925, exports to Scandinavia, Belgium, and France have actually fallen, despite drastic price reductions; quantities shipped to Italy and Egypt show little change; substantial improvement is recorded only in the case of Holland, Spain, and South America; and, it may be pointed out, the Spanish market is now in a state of acute glut, while British exporters have enjoyed a temporary advantage in Brazil and the Argentine on account of the miners' strike in the United States. In sum, the foregoing figures should serve to dispel any illusions still lingering that longer hours in the mining industry are proving in themselves a panacea for the exporting districts' troubles.

Wage Earners' Vacations¹

AN editorial in *The Iron Age*, October 27, 1927 (pp. 1174, 1175), calls attention to the growth of the vacation idea among employers. The case is cited of an engineering company employing about 800 men in its machine shops which has found that many of the employees working on an hourly wage basis are glad of the opportunity to take a week or two even at their own expense. In the past the men hesitated to ask for leave as they feared it might jeopardize their chances for advancement or even make their jobs less secure. One of the officials of the company felt that this might be the case, and accordingly notified the men that they might feel free to apply for leave of absence. As a result a very considerable number of the men took advantage of the offer during the past summer. It has been the practice of this company to give vacations with pay to those employees who have had 10 years' service with the company, and in case of sickness such employees are allowed to charge this time against their vacation allowance. The company is also considering increasing the length of the vacation for men who have been in the employ of the company for 20 years or more.

The editorial concludes:

Vacations with pay to workers by the hour or piece are comparatively new, though isolated instances have existed for years. Evidently the practice is spreading. It is usually confined to employees who have earned special consideration by long and faithful service. In spite of the large outlay, employers who have tried the plan seem to believe that it pays though the return may not be calculable. The practice should tend to keep intact the organization and reduce labor turnover. Perhaps, too, men do enough better work after such a leave to help make up the cost.

¹ For other articles on this subject see the *Labor Review* for May, 1926, pp. 1-7; July, 1926, pp. 35, 36; May, 1927, p. 36.

INDUSTRIAL ACCIDENTS

Reduction of Costs of Production Through Reduction or Elimination of Accidents

THE American Engineering Council has been carrying on for some time a comprehensive study of the relationship between accidents and production. A summary of some of the principal findings of the study was presented by Mr. W. W. Nichols, vice president of D. P. Brown & Co., at the executives' conference of the American Management Association held at Detroit in April, 1927.¹ This summary follows:

Early in 1926 arrangements were made whereby the National Bureau of Casualty and Surety Underwriters would place at the disposal of American Engineering Council a sufficient sum of money to defray the expense of the study. According to council's policy, a special committee was then appointed to direct the investigation and prepare a report. The complete report is now in the process of final editing by this committee.

The purpose of the investigation is to give a constructive impetus to the notable effort being made to reduce human and economic losses incident to industrial accidents by making an engineering and statistical investigation of the comparative relationship between rates of production and industrial accidents in American industry. A large body of information was obtained to enable the formulation of convincing answers to such questions as:

1. Does there exist in practice a relationship between accidents and production?
2. Is an increase in the production rate accompanied by a decrease in the accident rate?
3. Is a decrease in the production rate attended by an increase in the accident rates?
4. Does a factory with a high accident rate have a low production rate?
5. Does a factory with a high production rate have a low accident rate?

The study is nation-wide in scope and comprehensive in range of products inasmuch as it deals with 20 basic industries and 120 kinds of product. The extent of the data obtained and analyzed represents the experience of about 14,000 companies aggregating some 122,000 company years, employing 2,500,000 workers, with a total exposure of over 18,000,000 man-years, or approximately 55,000,000,000 man-hours.

Rates of production, accident frequency, and accident severity were calculated for individual companies, product groups, and industries as a whole. These rates are comparable inasmuch as they were determined by using the common denominator "man-hours." Since the rates of change occur simultaneously, it is possible to observe general production and accident trends. Trend curves show whether the rates are high or low for any particular year, and also the change from year to year for each combination studied.

This investigation of the relationship of accidents to production has disclosed most significant and fundamental facts, which may be considered applicable to industry generally because of the comprehensiveness of the study.

A brief summary of a few preliminary findings of the committee follows:

1. There is throughout American industry a positive indirect relationship between accidents and production. It is conclusively shown by unquestionable evidence that a steadily increasing productivity over a period of years is accompanied by simultaneous reduction in the frequency and severity of accidents.
2. The rate of production per unit of time worked has increased steadily and markedly during recent years.

¹ Published by American Management Association as production executives' series No. 52: Reduction of costs of production through reduction or elimination of accidents usually classed as unavoidable. New York, 20 Vesey Street, 1927.

3. In those parts of industry where organized safety campaigns are conducted, remarkable reductions have been made in both frequency and severity of accidents to workers.
4. There is considerable indication that maximum productivity is dependent upon the reduction of accidents to an irreducible number.
5. Relatively a small percentage of industrial plants throughout the United States are equipped to carry on well-organized safety work.
6. Increases in productivity are more manifest and uniform throughout various industries than are decreases in accidents.
7. Certain companies with excellent accident and production performance demonstrate the possibility of tremendous improvements in both for industry generally.
8. A marked improvement in accidents and production can be accomplished by the expenditure of a little effort on the part of management in industry.
9. An appalling loss of productive time and resulting loss of production value in American industry may be directly attributed to industrial accidents.
10. Lost productive time and lost production value are not the result of serious accidents alone. So-called "minor" accidents have a decided effect upon the production program.
11. There has been rapid growth in organized safety work throughout American industry in recent years, as indicated by the fact that organized safety work was established from 1920 to 1924 by 53 per cent of the companies surveyed.
12. A comparison of the rates of 1922 and 1925 for a large representative portion of American industry shows:
 - 12.7 per cent increase in the rate of production.
 - 18.5 per cent decrease in the rate of accident frequency.
 - 10.6 per cent increase in the rate of accident severity.
13. The possible improvement in the accident and production activities, as demonstrated by the experience of certain companies, is a challenge to the management of American industry as a whole.
14. The experience of companies in one-fourth of the industries studied shows outstandingly favorable accident and production performance. Marked increases in the rates of production have been accompanied by equally marked decreases in both accident frequency and accident severity rates in the following 15 industries and product groups: Acids and heavy chemicals; agricultural implements; by-product coke; castings; cement; corrugated cartons; explosives; iron and steel; iron mining; lumber; paper boxes; paper and pulp; sheet-metal products; steam railways—freight service; telephone and telegraph.
15. Less favorable upward trends in productivity accompanied by downward trends in frequency and severity of accidents were the experience of companies surveyed in the following four industries and product groups: Cotton and woolen fabrics; electric light and power; electric railways; steam railways—passenger service.
16. Unfavorable accident and production performance was the uniform experience of companies in certain other industries. Positive decreases in the rates of production were accompanied by marked increases in either the accident frequency or accident severity rates and in some instances in both. The industries are: Box board; knit goods; limestone quarrying; sandstone and bluestone quarrying; textiles.
17. Certain industries show marked increases in accident rates as, for instance: Automobiles; beehive coke; bituminous coal mining; brass, bronze and copper products; fine specialty machines; forgings; gold, silver, and miscellaneous mineral mining; special machinery; valves and fittings; writing paper; woodworking products; yarn and thread.
18. Marked reductions in accident frequency and accident severity rates have been made in a few industries simultaneously with slight decreases in production rates. These are: Anthracite coal mining; boilers; boots and shoes; gas; iron and steel Bessemers; iron and steel open hearth; paints and varnish; plywood.
19. Increase in production rate accompanied by decreases in either accident frequency or accident severity rates were the experience of companies in the following industries: Carpets; rugs; cement-rock quarrying; copper mining; furniture; granite quarrying; hardware; hoisting and conveying machinery; lead and zinc mines; machine building and metal working; machine tools; marble quarrying; men's clothing; newsprint; nonmetallic mining; slate quarrying; trap rock quarrying; wire and wire products.
20. Boots and shoes: The combined experience of three companies manufacturing boots and shoes, from 1921 to 1925, shows a slight downward tendency

of 32 per cent in the rate of production accompanied by a steady reduction of 23 per cent in the accident frequency rate, and a marked reduction of 75 per cent in the accident severity rate.

21. Building construction: Records of production and accidents are not generally kept by companies in the building industry.

22. Cement: The combined experience of 120 cement companies, manufacturing 90 per cent of the output of the United States, shows a steady and consistent increase of 32 per cent in the rate of production from 1920 to 1925, accompanied by an equally steady reduction in accident frequency and accident severity rates of 29 per cent and 30 per cent, respectively.

23. Chemical: There was a marked increase in the rate of production throughout the chemical industry during the five-year period, from 1921 to 1925. This accomplishment was attended by a reduction in accident frequency and accident severity rates.

24. Coal mining: The production rate for the anthracite coal-mining industry declined 4.6 per cent from 1916 to 1925, during which period the rate for the bituminous-coal mining industry increased 29.2 per cent. Anthracite coal mines appreciably decreased their accident fatality rate 14 per cent, although the rate for bituminous coal mines increased 38 per cent.

25. Coke: The accident and production performance of from 75 to 80 per cent of the total tonnage of the coke industry, manufactured by the by-product process has shown a continuous improvement during the nine-year period, from 1916 to 1924. A marked increase of 107 per cent in the rate of production has been accompanied by an equally marked reduction of 75 per cent in the frequency rate of accidents and of 37 per cent in the severity rate. While the beehive branch of the coke industry increased 44 per cent in the rate of production during the same period, it also showed a slight increase of 9 per cent in the frequency rate of accidents, and a considerable increase of 27 per cent in the severity rate.

26. Electric light and power: That part of the electric light and power industry studied in general is making slight increase in the rate of production expressed in kilowatt hours generated per man-hour worked. The combined rate of 25 companies increased only 2 per cent from 1921 to 1925. Although certain companies show a marked improvement in the reduction of accidents, the tendency for the industry as a whole is not so favorable. A slight reduction of 3 per cent in accident frequency is however accompanied by a considerable reduction of 22 per cent in accident severity.

27. Electric railways: Apparently little change is taking place in the production rate of the electric-railway industry. When expressed in car-miles operated per 1,000,000 miles of track the production rate for 175 companies increased 10 per cent from 1920 to 1925. When expressed in passengers carried per car-mile, it declined 19 per cent. The actual measure of service rendered probably lies somewhere between these two performances. During this same period there has been a very uniform improvement in the rate of accident frequency to employees, the over-all reduction being 39 per cent.

28. Gas: The general tendency for the gas industry is a slight reduction in the rate of production expressed in cubic feet per man-hour, accompanied by a marked reduction in both accident frequency and accident severity. Combined experience of seven companies for five years, from 1921 to 1925, shows a decrease of 8 per cent in production, a decrease of 24 per cent in accident frequency, and a decrease of 61 per cent in accident severity rates.

29. Ice: The combined experience of five ice companies demonstrates a possible achievement for that industry. From 1924 to 1925 these companies enjoyed an increase of 8 per cent in the rate of production and a decrease of 9 per cent in the frequency rate of accidents.

30. Iron and steel: Satisfactory conclusions for the iron and steel industry can not be drawn owing to the fact that inclusive data could not be obtained. However, the experience of those companies studied shows that an increase in the rate of production has been accompanied by a remarkable reduction in accident frequency and severity rates.

31. Lumber and logging: During the three-year period from 1923 to 1925, 13 lumber companies experienced a 10 per cent increase in the rate of production concurrently with substantial decreases in frequency and severity rates of accidents of 13 and 8 per cent, respectively.

32. Machine building and metal working: The accident production performances of the plants studied in the machine-building and metal-working industry are not at all uniform. In most divisions of the industry there occurred a con-

siderable improvement in productivity. In some divisions this was accompanied by decreases in frequency and severity of accidents, notably in those of agricultural implements, castings, and sheet-metal products. In other divisions increases in accident rates have occurred, notably in automobiles, brass, bronze, and copper products, fine specialty machines, forgings, special machinery, valves, and valve fittings. Reduction in accident severity rates have occurred more uniformly throughout the industry than reductions in frequency rates. During the period from 1923 to 1925 the machine-building and metal-working industry had an increase of 30 per cent in productivity as represented by the combined experience of 43 companies. This was accompanied by an increase of 16 per cent in accident frequency and a decrease of 22 per cent in severity.

33. Men's clothing: An increase in the production rate of a small sample of men's clothing industry was accompanied by an increase in accident frequency and a decrease in accident severity.

34. Mineral mining: In the entire mineral-mining industry an increase of 50 per cent in the rate of production was accomplished over the nine years' period from 1916 to 1924. This was accompanied by an increase of 14 per cent in the frequency rate of accidents and a decrease of 17 per cent in the severity rate. The performances of the copper mining, lead, and zinc mining, and nonmetallic mining groups are similar to that of the entire industry. The gold and silver mining group showed increases in all three rates. The iron-mining group showed an increase in the production rate accompanied by decreases in both accident rates.

35. Motor transportation: The experience of a large taxicab company for two years, from 1924 to 1925, inclusive, demonstrates that such companies can increase productivity and simultaneously reduce accidents. The production rate, expressed in car-miles per man-hour increased 7 per cent, while the accident frequency rate decreased 34 per cent.

36. Paper, pulp, and paper products: The analysis of the data received from plants in the paper and pulp industry shows as favorable and as uniform a performance in accidents and production as any industry studied. The rate of production has been steadily increased, approximately 20 per cent during the past five years, while simultaneously the accident frequency and severity rates have each been reduced approximately 30 per cent. This accomplishment is uniform throughout various product groups of the industry with the exception of the group of three companies manufacturing fine writing paper. These show an increase of 16 per cent in the rate of production from 1921 to 1925, accompanied by increases of 41 per cent and 96 per cent in the accident frequency and accident severity rates, respectively. Data were received from a number of small mills which demonstrated that the production rate can be materially increased while at the same time accident rates decreased.

37. Printing and publishing: The individual experience of printing and publishing companies shows consistently a marked improvement in the rate of production. The accident performance is not at all uniform. Some companies show marked reductions in the accident rates, while others show equally marked increases.

38. Quarrying: The quarry industry from 1916 to 1924 made but slight improvement in its accident and production performance. There was an over-all increase of 12 per cent in production for 660 quarries, accompanied by a slight increase of 3 per cent in the accident frequency rate and a slight decrease of 13 per cent in the severity rate. The fatality rate of the industry and most of its subdivisions definitely declined during the period. The number of less serious accidents increased. Most of the subdivisions show such wide fluctuations in production and accident rates that no definite tendencies are apparent.

39. Steam railways: Upward trends in the rates of production and downward trends in both accident frequency and fatality rates have been the story of American railways during the past 10 years. For the freight service of 176 Class I roads the rate of production expressed in 10 miles per man-hour increased 34 per cent from 1916 to 1925, accompanied by a pronounced decrease of 32 per cent in the accident frequency rate and an even greater decrease of 63 per cent in the accident fatality rate. The favorable performance of the passenger service is indicated by a slight increase in the rate of production expressed in passengers carried per car-mile, accompanied by a slight reduction of 8 per cent in accident frequency and a marked reduction of 23 per cent in accident fatality.

40. Telephone and telegraph: A marked reduction of 62 per cent in the accident frequency rate of mile plant forces for the telephone and telegraph industry has been accompanied by a marked increase of 26 per cent in the rate of production. This simultaneous improvement in both these rates has been made uniformly and consistently throughout the four-year period from 1922 to 1925.

41. Textiles: That portion of the textile industry surveyed shows almost invariably an unfavorable accident and production performance. Decreases in the rate of production are generally accompanied by increases in both accident frequency and accident severity rates, the increase in the severity rates being very marked. Numerous mills visited were unable to supply data because of the lack of records, which is presumably an indication of no organized safety activities.

42. Woodworking: The experience of plants in the woodworking industry is generally favorable in productivity but unfavorable in accidents. During the past few years substantial increases have been made in the rate of production by most groups and individual companies studied. This performance has been accompanied by a marked increase in either the accident frequency or accident severity rate. As an example, the combined experience of 12 furniture plants for 10 years from 1916 to 1925 shows an increase of 141 per cent in the rate of production, accompanied by an increase of 35 per cent in accident frequency and a decrease of 56 per cent in accident severity.

Accidents in United States Metal Mines in 1925

WITH more men employed and a greater number of man-hours worked in metal mines in the United States in 1925 than during any year since 1920, the fatality rate per 1,000 300-day workers, 2.99, was less in that year than in any of the 15 years for which nation-wide statistics are available. However, the non-fatal accident rate, which was 283.53, was slightly higher than in 1924, when it was 278.04, and higher than in any of the 15 years noted. Recomputed on an hours-of-exposure basis; making the figures comparable to similar rates published by this bureau, we obtain fatality frequency rates of 1 for 1925, 1.17 for 1924, and 1 for 1923, and nonfatality frequency rates of 94.51, 92.68, and 91.8, respectively. Severity rates are not given in the report, but may be computed as explained hereafter. Thus, for fatal accidents the severity rates (per 1,000 hours' exposure) are 5.99 for 1925, 7.02 for 1924, and 6.02 for 1923, and the nonfatal accident severity rate is 2.87 for 1925, the data being insufficient to compute such rates for the other two years. For 1925 the total accident severity rate is 8.86 and the frequency rate is 95.51. The average working time for each man was 293 days, being exceeded only in 1918, 1920, and 1923. These facts and other data to be noted, with extensive tabular matter, are included in Bulletin 282, recently issued by the United States Bureau of Mines on "Metal-mine accidents in the United States in 1925."

The metal mines in the United States in 1925 employed 126,713 men, or an equivalent of 123,908 300-day workers, representing 37,172,359 man-days. There were 371 fatal accidents and 35,132 nonfatal lost-time injuries during the year. Of these latter, 21 resulted in permanent total disability, 653 caused permanent partial disability, 8,163 were temporary injuries lasting more than 14 days, and 26,295 were injuries lasting from 1 to 14 days, and do not include those permitting the employee to return to work on the day following the accident. No exact figures are given as to days lost, but an estimate is arrived at by assigning 6,000 days to each death and permanent total disability, 800 days to each permanent partial disability, 32 days to each temporary disability lasting more than 14 days, and 6 days to each of the remainder.¹ Thus, the 35,503 acci-

¹ Based on a time allowance schedule computed by the Industrial Accident Commission of California, as the result of reports submitted to it, and published in its report for 1921 (p. 67).

dents caused an approximate time loss of 3,293,386 days, or an average of 92.8 days each, the total being 8.9 per cent of the total man-days worked in these metal mines. Accident severity rates have been computed on this basis in the following table, while the frequency rates have been converted to a man-hour-exposure basis by dividing by three the rates given in the report, which are on a 300-day-worker basis.

NUMBER OF ACCIDENTS IN METAL MINES AND ACCIDENT FREQUENCY AND SEVERITY RATES, BY CHARACTER OF DISABILITY AND KIND OF MINE

Nature of disability and kind of mine	Number of accidents			Frequency rates (per 1,000,000 hours' exposure ¹)			Severity rates (per 1,000 hours' exposure)		
	1923	1924	1925	1923	1924	1925	1923	1924	1925
Fatal:									
Copper	107	121	102	1.04	1.18	0.98	6.23	7.10	5.87
Gold and miscellaneous metal	114	145	128	1.31	1.66	1.28	7.86	9.99	7.66
Iron	89	97	80	.79	.98	.85	4.76	5.91	5.09
Lead and zinc	27	34	40	.91	.92	1.11	5.47	5.52	6.64
Nonmetallic mineral	30	21	21	.89	.65	.57	5.34	3.88	3.43
Total	367	418	371	1.00	1.17	1.00	6.02	7.02	5.98
Permanent total:									
Copper	(2)	(2)	5	(2)	(2)	.05	(2)	(2)	.29
Gold and miscellaneous metal	(2)	(2)	9	(2)	(2)	.09	(2)	(2)	.54
Iron	(2)	(2)	1	(2)	(2)	.01	(2)	(2)	.06
Lead and zinc	(2)	(2)	5	(2)	(2)	.14	(2)	(2)	.83
Nonmetallic mineral	(2)	(2)	1	(2)	(2)	.03	(2)	(2)	.16
Total	20	10	21	.05	.03	.06	(2)	(2)	.34
Permanent partial:									
Copper	(2)	(2)	175	(2)	(2)	1.68	(2)	(2)	1.34
Gold and miscellaneous metal	(2)	(2)	123	(2)	(2)	1.23	(2)	(2)	.98
Iron	(2)	(2)	103	(2)	(2)	1.09	(2)	(2)	.87
Lead and zinc	(2)	(2)	199	(2)	(2)	5.51	(2)	(2)	4.41
Nonmetallic mineral	(2)	(2)	53	(2)	(2)	1.44	(2)	(2)	1.15
Total	414	402	653	1.13	1.12	1.76	(2)	(2)	1.41
Temporary (over 14 days):									
Copper	(2)	(2)	3,162	(2)	(2)	30.34	(2)	(2)	.97
Gold and miscellaneous metal	(2)	(2)	2,154	(2)	(2)	21.48	(2)	(2)	.69
Iron	(2)	(2)	1,723	(2)	(2)	18.27	(2)	(2)	.58
Lead and zinc	(2)	(2)	753	(2)	(2)	20.84	(2)	(2)	.67
Nonmetallic mineral	(2)	(2)	371	(2)	(2)	10.09	(2)	(2)	.32
Total	8,531	8,398	8,163	23.33	23.50	21.96	(2)	(2)	.70
Temporary (1 to 14 days):									
Copper	(2)	(2)	8,837	(2)	(2)	84.80	(2)	(2)	.51
Gold and miscellaneous metal	(2)	(2)	7,990	(2)	(2)	79.68	(2)	(2)	.48
Iron	(2)	(2)	3,186	(2)	(2)	33.78	(2)	(2)	.20
Lead and zinc	(2)	(2)	4,679	(2)	(2)	129.53	(2)	(2)	.78
Nonmetallic mineral	(2)	(2)	1,603	(2)	(2)	43.58	(2)	(2)	.26
Total	24,598	24,308	26,295	67.28	68.02	70.74	(2)	(2)	.42
Total nonfatal:									
Copper	11,993	11,858	12,179	116.36	115.94	116.87	(2)	(2)	3.11
Gold and miscellaneous metal	8,672	8,649	10,276	99.62	99.27	102.47	(2)	(2)	2.69
Iron	5,616	4,959	5,013	50.08	50.34	53.14	(2)	(2)	1.72
Lead and zinc	4,894	5,718	5,636	165.22	154.72	156.02	(2)	(2)	6.68
Nonmetallic mineral	2,388	1,934	2,028	70.82	59.58	55.13	(2)	(2)	1.90
Total	33,563	33,118	35,132	91.80	92.68	94.51	(2)	(2)	2.87
Grand total	33,930	33,536	35,503	92.81	93.85	95.51	(2)	(2)	8.86

¹ Determined by multiplying number of 300-day workers given in the report by 3,000 hours.

² Rate can not be computed because of insufficient data for 1923 and 1924.

Accident statistics in this report are presented by States, by kind of mine, by cause, by nature of injury, and by mining method. A

table is also given showing a 15-year summary of accident data by kind of mine and by cause, and a 5-year summary of accidents by character of disability.

The greatest number of fatalities in 1925, 128, or 34.5 per cent, occurred in gold and miscellaneous metal mines, while copper mines reported the largest number of nonfatal injuries, 12,179, or 34.7 per cent. This relative condition also existed in 1924, the percentage, however, being 34.7 and 35.8, respectively. The fatality rate of 1.28 per million hours' exposure (3.83 per 1,000 300-day workers) in 1925 was highest in the gold and miscellaneous metal mines group, and the nonfatal injury rate of 156.02 (468.07 per 1,000 300-day workers) occurred in lead and zinc mines. Here again the situation was the same in 1924 when the rates were, respectively, 1.66 (4.99 per 1,000 300-day workers) and 154.72 (464.16 per 1,000 300-day workers). The greatest number of accidents were caused by falls of rock or ore from roof or wall, 108, or 0.3 per cent, meeting death, and 5,336, or 15 per cent, being injured in this manner.

Accident rates based on length of workday, covering the years 1923, 1924, and 1925, appear to have steadily decreased in mines working 9 and 10 hours, while in those working 8 hours the rates have remained practically unchanged.

The report includes a table showing the relative hazard in large and small mines, based on the number of employees, covering the years 1924 and 1925. This showing seems to put the small mines, employing from 1 to 24 men, in a considerably more favorable position as revealed by the nonfatal accident rates in both 1924 and 1925, while the fatality rates indicate very little difference in the hazards of these two groups of mines.

Accidents in the Mineral Industries

ACCIDENTS in the various branches of the mineral industries in 1925 and 1924, not including the steel industry and omitting nonfatal injuries in coal mines, reports for which are not received by the Bureau of Mines, are summarized in a table showing the average days active, the actual number of employees, and the number of equivalent 300-day workers, and the number of killed and injured with accompanying rates per 1,000 300-day workers. These frequency rates have been recomputed on an exposure basis in the following table, but the severity rates can not be given since the time loss is not available. The table is presented here in an abridged form.

NUMBER OF WORKERS, NUMBER OF ACCIDENTS, AND ACCIDENT RATES IN THE MINERAL INDUSTRIES IN 1925

Branch of industry	Number of 300-day workers	Number killed	Number injured	Accident rates	
				Fatal	Nonfatal
Coal mines.....	480,227	2,234	(1)	1.55	(1)
Metal mines.....	123,908	371	35,132	1.00	94.51
Quarries.....	83,487	149	14,165	.59	56.56
Metallurgical plants.....	66,220	44	7,711	.22	38.82
Coke ovens.....	24,054	28	1,696	.39	23.50
Total, 1925.....	777,896	2,826	58,704	1.21	65.74
Total, 1924.....	787,065	3,031	57,766	1.28	67.05

¹ Data not available.

A table giving a record of 15 years shows that during this period most of the fatal accidents at coal mines were from falls of roof or side, use of haulage equipment, gas and coal-dust explosions, and explosives; that at metal mines the main causes of fatalities were falls of rock or ore, falls of persons, haulage equipment, and the use of explosives, and that fatal accidents at quarries were mainly due to falls or slides of rock or overburden, haulage equipment, explosives, and machinery.

Organizations for Safety in Coal Mines

THAT safety organization in one of America's most hazardous industries, that of coal mining, is entirely practicable and productive of excellent results in preventing accidents appears to be demonstrated from the successful operation of a number of plans, the essential features of which are described in an article in Modern Mining (Pittsburgh) for October, 1927 (pp. 257-259). Notwithstanding the present high accident frequency and severity rates in this industry, it is believed that mining can be made quite safe "if managing officials and employees unite in a sincere and effectively organized effort to prevent accidents."

What is termed a "more or less standard form" of safety organization has been evolved from the various plans which have been put into operation in a number of mining centers. This organization consists of a chairman, who should be the manager, superintendent, or other ranking official of the company; a secretary, who should preferably hold the office of safety engineer or director; and members who should include all other supervisory officials of the company, and representatives of every type of workman employed. Experience seems to indicate, where such an organization has been formed and properly supported, results are so successful as to bring about its acceptance as a "permanent and important part of the business policy of the mine or industrial concern."

Membership

IT IS suggested that for coal mining the membership should be divided into three groups: 1. All supervisory officials, such as the superintendent and his assistants, the mine foreman and his assistants, the mine examiners and fire bosses, the driver boss, the tipple foreman, the labor foreman, and similar employees, and their membership should be permanent; 2. Three to ten miners and loaders selected from different sections of the mine, a motorman and helper, a track layer and helper, one or two shot firers, a wireman, a brick-layer, a timberman and helper, an electrician and helper, a machinist and helper, and one or two men working on the surface; a three-month term is assigned to the members from this group; 3. The office clerk, supply clerk, timekeeper, shipping clerk, mining engineer, company physician, and similar employee. The State mining inspector, or his representative, should be a member of this group, if possible.

Meetings and Order of Business

MEETINGS at least once a month are suggested, to be held at the mine office after regular working hours. Safety and nothing else should be the theme of these meetings. The minutes should be carefully kept and open to examination by company officials, employees, and State mining inspectors. Each shift, if more than one is operated, should have a separate safety organization, but joint meetings should be held occasionally. Joint meetings of all safety organizations in the various mines of a single company are recommended, to be held once every three months. Meetings to be attended by employees and their families may be held once a month.

The following is suggested as a suitable order of business:

1. Roll call and reading of minutes of the previous meeting.
2. Report by the secretary on the status of recommendations made at any previous meetings.
3. Report by the safety engineer of accidents which may have occurred since the preceding meeting, stating how they occurred and what action has been taken to prevent similar accidents in the future. Discussion.
4. Report by the safety engineer on mine hazards, with recommendations for remedying them.
5. Report of inspection made by the superintendent, mine foreman, safety engineer, or State mine inspector, since the last meeting.
6. Discussion of new bulletins, posters, or other safety information published by the United States Bureau of Mines, a State department of mines, mining journals, or newspapers.
7. Report by the safety engineer on the cooperation of employees, the number who have qualified in first-aid and mine-rescue training, or who have done some noteworthy safe or unsafe deed, etc.
8. Report of the safety engineer on safety progress made at the mine; comparison of accident records and other important statistics. Discussion.
9. Prepared address on safety, the subject and speaker to be selected by the chairman.

Duties of Officers and Activities of the Organization

THE article outlines in some detail the duties of the various officials and members of the mine safety organization, emphasizing the fact that its success depends largely upon the mine manager. He should make known the safety policy of the mine and insist that no worker be hired who is unwilling to support that policy. The mine superintendent should, of course, be in hearty accord with this policy.

The safety engineer, who is regarded as necessary if accident prevention is to be effective, although some mine owners are difficult to convince of this fact, should supervise first-aid and mine-rescue work, investigate and keep a record of all accidents, and arrange for the care of the injured, provide safeguards and remedy all unhealthful and unsanitary conditions, prepare the program for all safety meetings, and attend safety conferences as the accredited representative of his company.

The foreman and his assistants are ultimately responsible for the success of any safety program, and it is their job, partly, to see that the men cooperate to the fullest extent. They must demonstrate that executive ability and tact which are important in a supervising official. They are in immediate contact with the worker and upon them results depend more than upon any other group.

Since the miners, skilled workers, and laborers are to profit most by any plans for accident prevention that may be initiated, their

interest in the efforts of the management should be assumed. However, education is often necessary in order to point out how certain practices will safeguard their lives and thus create in them a real vital interest that will bring voluntary cooperation.

The clerks, engineers, physicians, and inspectors may be depended upon for information, statistical and otherwise, which the organization may use in promoting safety.

Activities that are suggested in the interest of greater safety in mines, to be carried out by the safety organization here outlined, include periodical safety campaigns; safety contests among different divisions of workers and different mines of the same company, with suitable rewards; and first-aid and mine-rescue contests. Safety instruction courses may be given. To assist in maintaining interest in safety work generally, the organization of a local chapter of the Holmes Safety Association¹ is suggested as very effective, since it brings the advantage of exchange of views, mutual aid in solving problems, and the maintenance of closer relations between employees and officials because of its affiliation with other chapters and the central association.

Explosives as a Cause of Mine and Quarry Fatalities

IN A pamphlet on production of explosives in the United States during the calendar year 1926 (Technical paper 426) recently issued by the United States Bureau of Mines, three pages are devoted to data on mine and quarry accidents due to explosives. It appears that but a small percentage of workers were killed by this means in bituminous coal mines, ranging from 5.11 in 1921 to 2.41 in 1924 and 2.23 (estimated) in 1926. A somewhat larger percentage is given for anthracite and bituminous mines together, ranging from 8.86 in 1919 to 4.17 in 1924 and 3.82 (estimated) in 1926; and a still larger per cent appears in metal mines, ranging from 14.22 in 1912 to 8.72 in 1922. The largest per cent of all is in quarries, where it was 27.27 in 1922 and 8.39 in 1923. Nonfatal injury percentages are not given for coal mines, but for metal mines they ranged from 2.00 in 1911 to 0.99 in 1925, and in quarries the range was from 6.33 in 1911 to 1.73 in 1918.

Rates per 1,000 men employed are also given. In bituminous mines this rate for fatal accidents was lowest in 1917 (0.112) and highest in 1921 (0.224), with 1925 showing 0.12. In anthracite and bituminous mines together the rate was highest in 1919 (0.38) and lowest in 1917 (0.173), with 1925 at 0.212. The fatality rate in metal mines ranged from 0.581 in 1912 to 0.309 in both 1921 and 1922 and 0.42 in 1925. The nonfatality rate in this group ranged from 4.52 in 1916 to 2.73 in 1915, with a rate of 2.81 in 1925. Quarries showed a fatality rate of 0.592 in 1911 and of 0.141 in 1923, rising to 0.24 in 1925, while the nonfatal injury rate was 4.42 in 1916 and 1.62 in 1925.

A table showing coal-mine fatalities underground due to explosives gives a total of 96 in 1926, which is the lowest since 1917, except in 1922 when there were 93 deaths from this cause.

¹Holmes Safety Association, 4800 Forbes Street, Pittsburgh, Pa.

Industrial Accidents in Iowa, 1925-26

A RECORD of industrial accidents in Iowa, not including mine and railroad train service, is presented in the report of the bureau of labor of that State for the biennial period ending June 30, 1926. While not giving comparative figures extending over several years nor including data from which frequency and severity rates may be computed, it is stated that the number and severity of industrial accidents in Iowa were reduced during the fiscal year ending June 30, 1926.

For this year 8,910 accidents, 40 of which resulted in death, are tabulated by cause and nature. Only those involving a time loss of more than two days are reportable in Iowa. About one-half (52.4 per cent) produced bruises, contusions, abrasions, cuts, punctures, or lacerations, while 7.7 per cent resulted in infection and 4.9 per cent involved the eyes. Falls and falling objects were the causes of the greatest number, the former producing 15.6 per cent and the latter 13 per cent of all accidents.

It is noted that since 1923 Iowa has stood practically stationary in total number of industrial employees.

Industrial Accidents in Kansas in 1926

THE annual report of the Public Service Commission of Kansas for the year ending December 31, 1926, devotes six pages to a record of industrial accidents occurring during that year. There were 10,417 such accidents, 81 of which were fatal, 126 caused permanent total or partial disabilities, and 10,210 were temporary. About one-third (3,665) of the total number of accidents were disposed of from the compensation standpoint, the total amount paid being \$867,550, or an average of \$236.71 per case. The time loss occasioned by these settled cases amounted to 309,475 days, which indicates an average of 84 days lost by each case. As compared with 1924 and 1925, the number of each type of accident was lower, but in no case was the percentage of decrease greater than 6.9, except in permanent disabilities, where the number in 1926 was 34.4 per cent less than in 1924 and 13.1 per cent less than in 1925. However, during the two preceding years all accident reports were included, regardless of whether or not there was any time loss.

Forty-eight of the fatal accidents occurred in coal mines (16), steam railroads (11), public utilities (11), and construction work (10); while steam railroads (30) and oil and natural gas (23) were responsible for 42 per cent of the permanent disabilities. The largest number of temporary disabilities (15.3 per cent) occurred in the oil and natural-gas industry.

As a cause, handling objects was responsible for the largest number of accidents, 2,285, or 21.9 per cent, including one fatal case, with falling objects (not handled by the injured) second, injuring 1,343, or 12.9 per cent, 17 of these being fatal cases and 11 permanent injuries.

Railway Accidents in Great Britain in 1926

THE English Ministry of Transport has recently issued a report (Cmd. 2941) dealing with accidents which occurred on the railroads of Great Britain during 1926, classing them as train accidents, due to such causes as collisions, derailments, and the like; movement accidents, in which individuals are injured by the movement of railway vehicles, exclusive of train accidents; and nonmovement accidents, including all others. During 1926 the total number killed was 374, a decrease of 91 from the preceding year, and the injured were 23,433, or fewer by 2,960 than in 1925. The fatalities were considerably below the average annual number (566) for the period 1915-1924, but the nonfatal accidents were slightly above the average (23,044) for the same period.

Of the deaths, 32 were due to train accidents, 284 to movement accidents, and 58 to nonmovement accidents. Of those killed, 198 were employees, 93 were passengers, and 83 were classed as "others." These were, it is explained, mainly persons who had business at stations or on the platforms or were crossing over the tracks at grade crossings. Of the injured, 4,267 were passengers, 18,473 were employees, and 693 were others. The disproportion in the number of employees is even more significant in view of the fact that accidents affecting them are not reported unless they involve an absence of at least one whole day from work, while all accidents involving passengers and other persons must be reported, no matter how slight the injuries received. Employees formed 53 per cent of the killed and 79 per cent of the injured.

Accidents in Mexican Mines in 1926¹

ACCORDING to the Department of Mines of the Mexican Ministry of Industry, Commerce, and Labor, there were 27,574 accidents in the mines of Mexico during 1926, of which 2,321 were classified as serious, resulting in 269 deaths. In 1925 there were 27,163 accidents, of which 4,195 were serious and 378 fatal.

The Department of Mines states that the decline in serious and fatal accidents in 1926 as compared with 1925 is due to the increased vigilance of its inspectors over mining operations.

The following statement shows the cause of the accident in 27,557 cases and in the 269 fatal accidents:

¹ From report of American consul, Charles W. Lewis, jr., at Mexico City, dated Sept. 29, 1927.

**NUMBER OF FATAL ACCIDENTS AND OF ALL ACCIDENTS IN MEXICAN MINES, 1926,
BY CAUSE**

Cause	Fatal accidents		All accidents	
	Number	Per cent	Number	Per cent
Machinery	64	23.79	2,652	9.62
Transportation	20	7.43	3,799	13.79
Explosives and fires	31	11.53	218	.79
Toxic substances, corrosives, etc.	6	2.23	45	.16
Electricity			6	.02
Falls (of laborers)	1	.37	103	.37
Collisions			48	.17
Falling of débris	88	32.71	9,219	33.45
Nonmechanical equipment	17	6.32	4,336	15.73
Hand tools			13	.05
Animals	1	.37	381	1.38
Other causes	41	15.25	6,737	24.45
Total	200	100.00	27,557	100.00

INDUSTRIAL HYGIENE

Anthrax Hazard in Pennsylvania¹

STUDIES of the occurrence of anthrax in the horsehair-dressing industry and the tanning industry were made by the Pennsylvania Department of Labor and Industry in 1920 and 1921, and although these studies showed that anthrax was not extraordinarily prevalent at that time it was shown that there was a definite anthrax hazard, especially in the tanning industry. In view of this fact it was decided to secure as complete information as possible on cases of anthrax occurring in the State, and arrangements were accordingly made with the State department of health and the health departments of the different cities to report such cases, while physicians and hospitals treating anthrax cases, employers in whose plants cases have occurred, and persons contracting the disease have also cooperated in furnishing information.

The present study includes all cases, both industrial and nonindustrial, reported to the department over the five-year period 1922-1926. During this time there were reported 7 fatal and 75 nonfatal cases of an industrial and 9 of a nonindustrial origin. By far the largest number of cases have occurred in the tanning industry. In the latest study half of the 80 cases were in this industry, 20 in the woolen and worsted industry, 12 in the hair industry, 6 in the transportation industry, and 2 cases which were not strictly industrial were classified as miscellaneous. One of these occurred in a veterinary surgeon and the other in a medical student handling anthrax cultures in a laboratory. Of the nonindustrial cases, three were the result of shaving-brush infection, and in the other cases the source of infection could not be definitely fixed. The majority of the industrial cases occurred in the age group between 20 and 39 years—the years of the most active industrial employment.

General statistics show that the anthrax lesions occur most frequently on the exposed portions of the body and the present study confirms this observation. There are several factors which account for this fact. The face, neck, and forearm are often the sites of pimples or other small breaks in the skin, and the neck and shoulders are often scratched by the sharp edges of materials carried on the shoulder. Such breaks may be infected either by coming in contact with the infected material or through the medium of the hands. It would appear that the hands would be the most frequent site of infection, since they most frequently come in contact with the infected material, but as a matter of fact the lesions seldom appear on the hands, only two of the cases reported having occurred in this location. The reason for this failure to develop the infection in the

¹ Pennsylvania. Department of Labor and Industry. *Labor and Industry*, Harrisburg, June, 1927, pp. 5-16: "Pennsylvania's five-year experience with anthrax," by Elizabeth B. Bricker, M. D.

hands is considered to lie in the fact that they are washed more frequently and more thoroughly than other parts of the body, and the organism has less opportunity, therefore, to gain a foothold.

The data show that early treatment of the disease is of great importance, and the report states that there is no reason why a case of anthrax, if it is promptly recognized and properly treated, should not make a speedy and uneventful recovery. The study also brings out the fact that cases occurring in an industry in which the hazard is recognized have a better chance for recovery than cases of a nonindustrial origin, since in the latter case the condition is frequently undiagnosed until the chance for recovery is past.

Analysis of the data relating to the length of disability shows that the average disability is shorter in those cases receiving the earliest treatment. In the tanning industry the average number of days lost per nonfatal case was 47.7; in the woolen and worsted industry 57.4 days; in the hair industry, 59.1 days; and in the transportation 58.5 days.

In the control of a disease of this kind it is important to know the countries from which the infected materials come. It is extremely difficult, however, to trace the source of infection since materials from several countries are usually handled at the same time. At the present time, although the United States Department of Agriculture through the Bureau of Animal Industry has certain regulations in effect designed to control and prevent the spread of anthrax among livestock in this country, these regulations do not sufficiently protect the workers in industries handling foreign hides and wool. Under the present system part of the material is not disinfected until it reaches its destination, giving opportunities for the infection of persons handling the material at various points along the way. It is suggested in the report that the situation might be dealt with either by establishing disinfecting stations at shipping points in foreign countries or by the establishment of disinfecting stations by the Federal Government at the several ports in the United States where such material is received.

In the absence of such regulations, however, it is advocated, in order to minimize the danger in manufacturing plants, that adequate washing facilities should be provided and their use required; dust removal systems should be installed in dusty processes, and vacuum cleaning or thorough wetting of floors before sweeping should be substituted for dry sweeping; there should be proper medical care of employees, including prompt dressing of all breaks in the skin and subsequent daily inspection of such injuries until they are healed; and all workers should be instructed as to the danger of infection and the necessity for immediate medical attention for all afflictions of the skin. The value of colored posters which show the different stages of the cutaneous form of anthrax has been demonstrated in a number of instances, both in this country and Great Britain. In two of the cases reported in this study, where the patients were familiar with such posters, the diagnosis was suggested to the attending physician by the patient himself.

Eye Conservation Through the Compulsory Use of Goggles in Workshops

THE compulsory use of goggles in every workshop was advocated by Harry Guilbert, director of safety of the Pullman Co., in an address at a conference on the prevention of blindness, held in Chicago in October by the National Safety Council and the National Committee for the Prevention of Blindness, according to a press release issued by the latter organization under date of October 14.

Such a mandatory rule was said by the speaker to be enforced in all the repair shops and yards of the Pullman Co., and as a result it is estimated that the eyes of approximately a thousand of their men have been saved from serious injury or destruction during the past five years, only one eye having been lost among these workers during that time. In the opinion of Mr. Guilbert, nothing short of compelling the men to wear the goggles will serve, as every effort was made to get them to wear them prior to issuing the order, through spectacular bulletins, horrible examples, pleading and threatening, all with very little success, and he believes that the elimination of eye accidents will never be attained until every industrial employee is required to wear goggles at work on penalty of dismissal. This rule is rigidly enforced in every repair shop of the Pullman Co. and applies not only to the employees, but to officials of the company and to visitors.

As reasons for such drastic measures to prevent industrial eye accidents the experience of Pennsylvania and New York in recent years is cited. In Pennsylvania the sight of 6,842 eyes has been completely destroyed in industrial accidents since 1916, while from January 1, 1927, to date, 383 eyes have been made sightless in industries of that State, the industries in which these accidents occurred ranging from coal mines to restaurants. In one year more than \$800,000 was paid in compensation, representing an estimated total economic loss of \$5,000,000. In New York the loss was even greater, as the compensation for eye accidents amounted to \$1,700,000 last year. According to the National Safety Council's estimate that the total cost of industrial accidents is five times the amount of the compensation payments, this class of accidents cost the workers, the employers, and the public more than \$8,000,000 in the single year.

All safety engineers recognize the difficulty of getting the workmen to protect their most valuable asset—their sight—and it is said that the Pullman shops are the only shops where goggles are worn universally from president down to office boys or visitors who may come into the plant for only a few minutes. It is useless to expect workmen to use goggles and other protective devices if managers, foremen, and safety engineers do not set a good example by protecting their own eyes.

An examination of the eyes of 4,000 men in the Pullman shops showed that only 1,139, or 28 per cent, had normal vision without glasses; 1,539, or 38 per cent, had normal vision in both eyes when they wore glasses, while the remaining 1,322, or 34 per cent, had defective vision. Seventeen per cent of the total number examined had only 5 per cent of normal vision, in many cases as the result of early eye injuries.

Occupational Diseases of Agricultural Laborers¹

A STUDY of occupational diseases among agricultural workers forms the subject of a brochure issued by the International Labor Office as part of the Encyclopedia of Hygiene, Pathology, and Social Welfare.

The report points out that conditions among agricultural workers vary greatly not only between different countries but also between different districts in the same country, and that as a result of these differences in living conditions, education, etc., as well as the existence of overpopulation or underpopulation, there is great variation in the hygiene and pathology of these workers. It is generally considered that agriculture has no specific occupational diseases, but that long hours and fatigue due to carrying heavy loads are the principal causes of those diseases due to the occupation. It is true that agriculture presents certain advantages over industrial employment, such as work in the open air and in the sunlight, but on the other hand there is a variety of hazards, including exposure to rapid changes of weather and temperature, to diseases connected with the work in various crops and those contracted as the result of tending stock, and to accidents from farm machinery, in woodcutting, etc.

Among the operations which are particularly fatiguing are mowing, harvesting, digging, and threshing. The occupations frequently cause acute morbid symptoms, the result of fatigue, such as fever, headache, pains in the joints, intense thirst, and drowsiness. Such attacks are of short duration, lasting usually for one or two days. Acute inflammation of the tendon sheaths of the flexor muscles of the hand is frequently found among young workers. This condition is caused by fatigue and is quickly cured by rest. An inflammatory condition of the muscles of the back resembling sciatica is often the result of work which puts an undue amount of strain on the muscles in the lumbar region.

Agricultural workers who tend stock are subject to the risk of accidents, and to infectious diseases: Anthrax, tetanus, glanders, foot and mouth disease, actinomycosis, the bacillus of abortion, etc. Various mites and animal parasites are transmissible to workers and cause different forms of dermatitis. There is a variety of conditions which cause irritation and disease of the eyes. These include conjunctivitis due to dust raised during threshing operations; hay fever caused by the pollen of flowers and by the extremely fine hairs found on the surface of leaves and fruits, while the dust of certain bulbs such as hyacinths and crocuses, also sets up conjunctival inflammation. Severe retinitis results from exposure, without protection, to the sun's rays in summer. A specific disease, vibrio-gangrene, is found among workers who carry and spread manure. This disease is a serious one in which there is the formation of ulcers on the eyelids which rapidly pass into a moist gangrene and which is accompanied with swelling of the face, chest, and neck and a high fever. This disease always results in serious deformity of the eyelids. One authority considers this disease characteristic of southern countries while another thinks it can also occur in colder climates.

¹ International Labor Office. Occupation and health Brochure No. 73: Occupational diseases of agricultural laborers. Geneva, 1927. 7 pp.

Ocular accidents, the result of injury or of foreign bodies penetrating the conjunctival mucous membrane are frequent. Workers about stables are often the victims of typhoid fever, of intestinal affections due to the bacillus coli, and of vaccines. Diseases of the circulatory organs, including heart disease, arteriosclerosis, etc.; of the digestive system; and of the peripheral nervous system (neuritis, especially of muscles fatigued from work such as potato digging, milking, etc.) are common, while deformities of the spine and of the leg are frequently seen.

In general much needs to be done in a legislative way to correct the unfavorable conditions among agricultural workers in nearly all countries. Measures advocated by the International Labor Conference for ratification by the different countries include measures for the prevention of unemployment, protection of women before and after childbirth; prohibition of the work of children under 14 years of age; regulation of the night work of women; vocational training for children; improvement in technical education in agriculture; improved housing; recognition of the rights of association and combination; compensation for accidents; and social insurance.

Investigation of Health Hazards in Australian Woodworking Industries¹

AT THE request of the Australian Timber Workers' Union an investigation of the health hazard from sawdust in the various woodworking industries using both Australian and imported timbers was made in 1926 by the division of industrial hygiene of the Commonwealth department of health.

A preliminary investigation included inquiry from the secretaries of the State branches of the different unions as to ill effects reported among their members from exposure to wood dusts and the sending of questionnaires to ear, nose, and throat specialists and to dermatologists throughout Australia for the purpose of discovering, if possible, the degree of prevalence of nasal, asthmatic, and skin trouble among woodworkers.

The replies from the union secretaries gave very little definite information, only four specific cases being reported by them, while of the 24 specialists in diseases of the ear, nose, and throat who replied to the inquiry 14 stated that no cases of nasal trouble caused by wood dust had come to their attention; 7 said that they had seen such cases but they were not common; 1 reported that such cases were very frequent; and 1 reported that 10 per cent of the workers in jarrah mills suffered from chronic nasal catarrh. Thirteen of the dermatologists answered the questionnaire, three of whom stated that they had had no cases, while the others reported that they had observed such cases but they were very rare.

The investigation proper included the examination of 208 men employed in joinery and furniture factories in Melbourne for evidence of nasal irritation, asthma, and dermatitis, and of 10 other woodwork-

¹ Australia. Department of Health. Service publication (Division of Industrial Hygiene) No. 4: An investigation of certain health aspects in persons engaged in the woodworking industries, by D. G. Robertson, M. D. Melbourne, 1927.

ing employees with special reference to skin irritation from the wood dusts.

It was found that 78 employees, or 37 per cent, of those examined had some affection of the nose or throat. In a number of cases the abnormal condition preceded employment in the woodworking industry but in general it was considered that the percentage of workers found to be affected was considerably greater than would be found among the population at large. Wood machinists showed a larger percentage affected than the other occupational groups. Among persons working on machines fitted with efficient exhaust there was less nasal trouble although this difference was not so marked as might have been expected. Two cases of the five giving a history of asthmatic attacks were considered to be probably caused by the timber dust, and there were 10 cases of dermatitis and one case of urticaria (hives). Hardwood appeared to be the most irritating, most of the nasal cases being caused by the dust from such wood, while black-wood caused nine cases of dermatitis, mountain ash and pear trees one case, and the case of urticaria was due to working with jarrah, red pine, and white pine.

As a result of the investigation it was recommended that efficient exhaust systems should be installed wherever woodworkers are subjected to the inhalation of wood dust, but in the case of dermatitis it was shown that comparatively few persons have skins which are hypersensitive to the dusts and in such cases a cure can hardly be expected without removal from exposure.

Telegraphers' Cramp in Great Britain

TELEGRAPHERS' cramp has been the subject of considerable study in Great Britain. The departmental committee on compensation for industrial diseases took up the matter at some length in 1908¹ to determine whether the disease should be added to the list of compensable diseases, with the result that by order of the Secretary of State, dated December 2, 1908, the provisions of the workmen's compensation act were extended to cover it. A committee was next appointed to inquire into the prevalence and causes of the disease and to report what means might be adopted for its prevention. A detailed report of its findings was published in 1911.²

According to this report, the ailment had been variously regarded by the authorities as a muscular disorder, as a disease of the peripheral nervous system, and as a disease of the central nervous system. After careful consideration of these antagonistic theories, the committee accepted the view that telegraphers' cramp "is a disease of the central nervous system, and is the result of a weakening or breakdown of the cerebral controlling mechanism in consequence of strain upon a given set of muscles." The statement was also made that although telegraphers' cramp in Great Britain had been associated mainly with the use of the Morse instrument, "any instrument

¹ Great Britain. [Home Department.] Committee on Compensation for Industrial Diseases. Second report. London, 1908. Cd. 4337.

² Great Britain. [Post Office.] Committee on Telegraphists' Cramp. Report. London, 1911. Cd. 598.

which calls for repeated fine muscular movements of the same kind may involve a relative 'occupation spasm' or 'craft neurosis.' Thus, while we have associated the term 'telegraphists' cramp' with the disease which brings about a difficulty in making the specific coordinated movements needed for a proper manipulation of the particular instrument known as the Morse key, the manipulation of the Baudot or Hughes keyboards may similarly bring about a relative form of cramp (analogous to pianists' cramp); and all these forms of cramp are on parallel lines with writers' cramp."

Recently, the Industrial Fatigue Research Board has published the results of a study³ made at the suggestion of the Union of Post Office Clerks. This investigation did not deal with the medical aspects of the ailment which had already been considered by the departmental committee in 1911, but with the question, arising from the work of that committee, as to the specific susceptibility to the disease among persons engaged or about to engage in telegraphy. Attention was devoted to a group of operators certified as suffering from cramp and to another group apparently free from it. These groups were intensively studied, in order to find whether those suffering from cramp possessed in common any other characteristic not possessed in the same degree by those who had been exposed to an equal risk but had not contracted the disability. Selected psychological tests involving speed and accuracy of movement were applied individually, and a medical study of each subject was made, with special reference to the presence or absence of psycho-neurotic symptoms. The results of this part of the investigation showed that the cramp subjects possessed greater susceptibility to muscular fatigue (as measured by the ergograph), less ability to perform quick and accurate movements (as measured by the dotting machine), less complete control over the muscles when sending a message, and a greater prevalence of psychoneurotic symptoms than the normal subjects. However, the two groups were not completely differentiated by any of these tests, so there was no assurance that liability to cramp could be detected with certainty in individual cases. Reference is made to the fact that previous research had shown that there was no one condition of the work and no specific organic state that could be regarded as the invariable antecedent of cramp.

Various objective factors, such as types of keys, length of service, hours of work, bad style, were reviewed and found not to be a necessary antecedent. Even the physiological signs of cramp were shown to be indeterminate, as there might, or might not, be a visible spasm, and the disability in its objective manifestations could be specific to one letter, or be selective for certain muscular activities, or be associated with general muscular weakness. Details of six cases specially examined from the medical point of view were appended. In each case the organic condition was reported to be normal.

The type of disability varies with the individual. The following were some of the types met with in the study of the Industrial Fatigue Research Board:

- (1) There are those suffering from a general disability to use the arm after many years of sending; not only is the use of the telegraphic key or a pencil interfered with, but also most other actions which demand the use of the arm.

³ Great Britain. Industrial Fatigue Research Board. Report No. 43: A study of telegraphists' cramp. London, 1927.

The holding of a cup, or of a needle for sewing or knitting, is difficult or impossible; a glass if taken up may be dropped; even the handle of a spade can not be grasped. This disability may or may not be accompanied by pain, which may be localized in the wrist or may be general.

(2) There are those who can neither send nor write, but who can use the arm for other occupations, e. g., they can play the piano, use a spade, and are quite efficient if the larger muscles are brought into action. This group comprises very many individual variants from ability to use the arm for anything except telegraphic work, through various grades of inability, to total disability as described in the previous section.

(3) Others again are all right, having no pain, and no muscular disability except for the sending of a particular letter or group of letters. Particular combinations of dots and dashes prove stumbling blocks. Some have difficulty in letters involving a sequence of dots, particularly at the end of a word; others find that having got the key down they can not get it up again quickly enough for the formation of dots; in other words, the key seems "sticky."

WORKMEN'S COMPENSATION AND SOCIAL INSURANCE

Farmers Covered by California Workmen's Compensation Law

UNDER the provisions of the California workmen's compensation insurance act of 1917 it was necessary for employees engaged in farm, dairy, agricultural, viticultural, or horticultural labor, or in stock or poultry raising, and their employer, jointly to elect to come under the compensation provisions of the act. (Stats. 1917, ch. 586, secs. 8, 70.) By an amendment effective September 1, 1927, any employer and his employee engaged in the above employments and not subject to the act by election were, from September 1, 1927, conclusively presumed to have accepted the compensation provisions of the above act unless either such employer or employee, prior to the occurrence of any injury, gave notice of rejection of the provisions of the act in accordance with the terms of the act. (Stats. 1927, ch. 834.)

The Division of Industrial Accidents and Safety of the Department of Industrial Relations of California has issued a circular calling special attention to two facts due to the change made by this statute: 1. If the farmer elects not to come under the provisions of the act, he falls within section 1, chapter 399, of the Statutes of 1911, and if sued for damages because of the injury or death of an employee, he is deprived of the defenses of assumption of risk and the fellow-servant doctrine and finds that the doctrine of relative negligence has modified the old rule of contributory negligence (citing a farmer's case, *Robinet v. Hawk*, 252 Pac. 1045). 2. If the farmer does not affirmatively give notice of rejection of the provisions of the act in the manner provided, he must secure the payment of compensation by insuring his risk as provided by section 29, chapter 586, of the Statutes of 1917, or he is guilty of a misdemeanor and subject to a fine of \$500 or six months in jail or both. (Stats. 1925, ch. 300, sec. 1, amending Stats. 1917, ch. 586, sec. 29.)

The circular contains the following provisions, which are interesting and valuable as precedents in coverage of farm employees:

The premium rate for insurance under workmen's compensation is identical with the rate under a limited employer's liability policy. A farmer would be foolish, indeed, to take out an employer's liability policy carrying a limit of \$10,000 where he may be sued and judgment recovered up to as much as \$100,000, when he can have complete coverage and complete protection for the same total cost. The premium rate per \$100 pay roll for ordinary farm labor done on the premises is \$2.13. The rate is \$4.89 per \$100 for work involving the handling of machinery away from the premises of the employer. Where an employer maintains a fruit picking crew and his pay roll is in excess of \$2,500 per annum, he may receive a rate of \$1 per \$100. The State compensation insurance fund will write a policy of insurance for a farmer at a minimum charge of \$15, which covers a pay roll up to and including \$704 per year.

The usual policy excludes a husband, wife, son, daughter, brother, sister, or parent residing within the employer's household. If insurance coverage is desired for any of the above, this may be secured, and the premium is based on an annual wage of \$2,700.

Compensation for Eye Injuries in New York State, 1926-27

EYE injuries continue to constitute one of the most serious and costly phases of industrial accidents in New York State, according to a recent statistical review of such cases disposed of during the year ended June 30, 1927, published in the Industrial Bulletin for September (page 339) issued by the industrial commissioner of that State. Only a few other injuries, it is stated, such as the maiming of a hand, an arm, or a leg, cost more in money than eye injuries. During the year there were 2,948 compensated injuries involving the eyes, of which 2 resulted in death, 10 were totally blinded, 786 (26.7 per cent) resulted in permanent partial disability, and 2,150 (72.9 per cent) were temporary, lasting for more than a week each and ultimately recovering. The total compensation paid in these cases, based on 84,893 weeks of disability, was \$1,703,235, exclusive of medical and hospital care and representing two-thirds only of the estimated wage loss. The average cost per case was \$577.76,¹ which is more than twice as much as the \$284.75 representing the average award in all types of injuries during the year. The two deaths and one of the cases of permanent blindness cost the employers or insurance carriers \$25,000 in compensation payments alone, to say nothing of the medical bills, administrative cost, and other expenses.

Considering the time loss, the report notes that in temporary injuries (those followed by complete recovery) the compensated time loss for all accidents averaged 5.3 weeks, whereas for eye injuries the temporary awards averaged only for 3.5 weeks; for permanent injuries of all kinds the average time loss was 42.9 weeks, while in permanent eye cases it was 98.3 weeks.

Attention is directed to the hazard caused by flying particles, especially flying chips or other articles set in motion by hand tools. Of 786 permanent eye injuries, 410 were caused in this way, 266 being due to hand tools alone, and in 105 of these latter cases the award covered an average period of 122 weeks each. In addition to these cases there were 495 accidents directly due to hand tools and 597 caused by flying particles that left no permanent injury but caused a time loss for which the wage compensation alone amounted to \$58,905.

Most of the 786 permanent injuries occurred in the manufacturing industry (43 per cent), with construction a close second, credited with 226 or 28.8 per cent. These two groups were responsible for 564 (71.7 per cent) of the temporary eye disabilities. The compensation awarded in the manufacturing industry for all eye injuries was \$685,360, and in construction, \$523,527.

Double Compensation Awards to Minors in New York State, 1926-27

THE Industrial Bulletin for September, 1927, issued by the Industrial Commission of New York State, contains an article giving interesting data on double compensation awards to minors under 18 years of age who were injured at their work. During

¹ Apparently this includes medical and hospital care, since the average is not derived from the number of cases and the total compensation paid as given above.

the year ended June 30, 1927, 27 boys and girls under the age named, who were illegally employed, were awarded compensation in double the amount usually allowed for similar injuries where the employment is legal. Nineteen of these children were injured while operating very dangerous power-driven machines, which boys and girls under 16 years of age under the labor law were specifically prohibited from doing. Four of them were working without a certificate; two were under 14 years of age; one was working between the hours of 12 and 6 in the morning; and one, under 18 years of age, was cleaning machinery which was in motion. All of these conditions were illegal. Twenty of these boys and girls received some form of permanent disability, one of which was the loss of an entire arm, another the loss of a hand, and a third the loss of 95 per cent of the use of a hand.

The machines which are named in the labor law as being too dangerous for children to operate were the ones responsible for the injuries. Power presses caused seven of the permanent injuries and three were caused by power cutting machines.

The law of New York provides that the employer alone shall be liable for the increased compensation awarded on account of injuries sustained by minors while illegally employed, and the cases herein referred to cost the employers \$22,808; this with a like sum paid by the insurance carriers made the total cost in the 27 cases \$45,616.

Lump-Sum Settlements in New Jersey, 1926-27

THE Industrial Bulletin of the Department of Labor of New Jersey, October, 1927, contains an article showing the experience of the State of New Jersey for the year ending June 30, 1927, under the commutation or lump-sum settlement clause of the workmen's compensation act.

The New Jersey compensation act, as amended by chapter 93, acts of 1919, provides that compensation under the act may be commuted by the workmen's compensation bureau at its present value, when discounted at 5 per cent simple interest, upon application of either party with due notice to the other, if it appears that such commutation will be for the best interest of the employee or the dependents of the deceased employee; or that it will avoid undue expense or undue hardship to either party; or that such employee or dependent has removed or is about to remove from the United States; or that the employer has sold or otherwise disposed of the greater part of his business or assets. The act further provides that in the interpretation of the above it is the intention of the act that compensation payments are in lieu of wages and are to be received by the injured employee or his dependents in the same manner in which wages are ordinarily paid, and that as commutation is a departure from the normal method of payment it is to be allowed only when it clearly appears that some unusual circumstances warrant such departure. The act specifically states that commutation shall not be allowed for the purpose of enabling the injured employee or the dependents of a deceased employee to satisfy a debt or to make payment to physicians, lawyers, or any other persons.

From July 1, 1926, to June 30, 1927, 305 petitions for full or partial commutation of compensation were acted on, of which 162, involving \$165,271, were approved and 143, involving \$182,643, were disapproved. The 305 petitions related to 37 fatal and permanent total disability cases and 268 permanent partial disability cases. Of the former, 21 cases, amounting to \$31,865, were approved and 16 cases, amounting to \$68,544, were disapproved. Of the latter, 141 cases, amounting to \$133,406, were approved and 127 cases, amounting to \$114,099, were disapproved. Of the 21 fatal cases approved, 5 cases, totaling \$11,082, were approved for the full amount and in 16 cases, totaling \$20,783, only partial commutation was allowed. Of the 141 permanent partial disability cases approved, 79, totaling \$101,328, were approved for the full amount and in 62 cases, totaling \$32,078, only partial commutation was allowed.

The article includes a table showing the purposes for which commutations were allowed. Of the total of \$165,271 allowed, \$47,905 was to be used for the purpose of starting in business, \$43,547 for the payment of mortgages, \$34,063 for leaving the country, \$14,001 for buying property, \$12,673 for living expenses, \$6,012 for health, \$1,700 for education, and \$5,370 for other purposes.

Electrical Workers' Old-Age Pension Plan¹

ANY member of the International Brotherhood of Electrical Workers who has reached the age of 65 years and has been in continuous good standing with that organization for 20 years prior to making application for an old-age pension is eligible to a monthly benefit of \$40; an additional \$2 is to be appropriated from the fund to cover the pensioners' regular union dues. This pension plan was adopted at the nineteenth biennial convention of the brotherhood, which was held in Detroit in August, 1927.

Pensioners will not be allowed to do any electrical work of any kind for anyone either for compensation or gratis.

Old-Age Pensions in British Columbia

ACCORDING to the Canadian Congress Journal, in its issue for October, 1927, the Province of British Columbia has adopted the old-age pension plan authorized by the Canadian Parliament in March last. (See Labor Review, May, 1927, p. 106.) That legislation provided that if any Province elected to establish an old-age pension scheme conforming to the requirements laid down in the act, the Dominion Government would assume a definite proportion of the cost of the pensions provided. British Columbia has taken the necessary steps and, according to its agreement with the general government, is to pay a maximum pension to such of its residents as have attained the age of 70 and meet the other requirements of the act. On its part the Dominion Government is to pay to British Columbia quarterly one-half of the amount paid by the Province

¹ The Journal of Electrical Workers and Operators, Washington, October, 1927, p. 514.

in pensions during the preceding three months. The Journal summarizes briefly the terms of the pension act, as follows:

The maximum amount paid to any recipient of old-age pensions is \$240 per year. Applications for pension may be made by a British subject, or a widow who is not now a British subject, but was before her marriage, upon attaining the age of 70 years. Each applicant must have resided in Canada for 20 years immediately preceding the date of the application, and lived in the Province for five years. No subject who is an Indian within the meaning of the Indian act is eligible. If a pensioner has a yearly income over \$125, the maximum amount of \$240 payable annually is reduced in his case by the sum received by him by way of income in excess of \$125.

British Columbia is the first of the Provinces to adopt the plan, but Yukon has authorized its commissioner to sign the agreement with the general government when he arrives in Canada, and Manitoba and Saskatchewan are inquiring as to the steps to be taken in order to come into the scheme.

New English Unemployment Insurance Bill

ONE of the important matters brought before Parliament when it reassembled on November 8, 1927, was a bill recasting the legislation dealing with unemployment insurance. The Ministry of Labor Gazette (London), in its issue for October, 1927, gives a summary of the provisions of this bill. Since the principal bill of 1920 was passed there have been 14 amending acts, so that at present the situation is far from satisfactory. Last spring a committee appointed to consider how it could be bettered brought in a report, generally referred to as the Blanesburgh report, recommending a number of changes. (See Labor Review, April, 1927, pp. 47-51.) The present bill, introduced by the Government, is, in part, based upon that report.

The bill retains the present rates of contribution, under which for each insured man the employer contributes weekly 8d., the employee, 7d., and the Government, 6d., departing in this respect from the Blanesburgh report, which had recommended that the contributions from all three should be the same. The weekly rate of benefit for men with no adult dependents is reduced from 18s. to 17s., the rate in respect of adult dependents is raised from 5s. to 7s., and the rate for dependent children remains, as at present, at 2s. Young people between the ages of 18 and 21, who at present pay the same contributions and receive the same benefits as adults, will have both contributions and benefits lowered, and boys and girls between 16 and 18 will receive 6s. and 5s., respectively, instead of 7s. 6d. and 6s., respectively, as at present.

A number of minor changes are made concerning dependents in respect of whom benefit may be claimed, and matters of administration, but in addition there are two important alterations, likely to have, if adopted, far-reaching effects. The first deals with the so-called "extended" benefit. Under the present law there are two kinds of benefit—"standard," to which the worker is entitled for a definite period by virtue of having paid a certain number of contributions into the fund, and "extended" benefit, which is paid under certain conditions when a worker has exhausted his standard benefit

and still can not secure employment. Under the new bill it is provided that a claimant is not entitled to benefit unless he has paid into the fund at least 30 contributions (or, in the case of disabled ex-service men, 15 contributions), within two years preceding the date of his claim. If he meets this requirement, he is entitled to benefit for as long as he is honestly unemployed, though his case must be reviewed quarterly.

The second important change respects the kind of employment the claimant may be required to accept. Under the present law he is not entitled to benefit if he refuses "suitable" employment, and in practice this has generally been defined as work at his own trade or occupation. The new bill provides that after a lapse of a reasonable interval, employment of a kind other than the claimant's usual employment may be regarded as suitable, subject to certain safeguards.

This second change will certainly be highly distasteful to the unions, who will see in it a breaking down of their trade lines. The other has already been the object of severe criticism from economists, who inquire what is to be done with the man who is wholly unable to qualify under this proviso. The only apparent alternative is for him to apply for poor relief, funds for which are raised by local taxation. This means that in areas where the depression has been most severe and long continued the burden of unemployment, translated into terms of taxation, will be heaviest, and industry will be most seriously handicapped.

Pensions and Pension Expenditures in New Zealand

THE pensions department of New Zealand has recently issued its twenty-ninth annual report, covering the year ending March 31, 1927, from which the following data are taken relative to the situation at the close of the fiscal years 1925-26 and 1926-27.

NUMBER OF PENSIONS IN FORCE MARCH 31, 1926, AND 1927, AND TOTAL PENSION PAYMENTS, 1925-26, AND 1926-27

[Pound sterling at par = \$4.8665; exchange rate about par]

Class of pension	Number in force March 31, 1926	Total payments, 1925-26	Number in force March 31, 1927	Total payments, 1926-27
War	20,716	£1,185,161	20,625	£1,128,988
Old-age	22,905	908,577	23,751	982,356
Widows'	3,833	286,450	3,970	301,861
Maori War	444	23,067	374	19,458
Miners'	640	40,239	608	41,940
Epidemic	313	14,522	250	10,951
Blind	196	8,053	232	10,338
Boer War	60	2,902	64	2,624
Special annuities	102	8,752	113	10,054
Civil service act	55	16,855	50	14,659
Total	49,204	2,489,578	50,106	2,523,229

It will be noticed that war pensions are responsible for a larger part of the annual outlay than any other group, the pensions for the Maori, the Boer, and the World Wars accounting for 48.6 per cent of

the total expenditure in 1925-26, and for 45.6 per cent in 1926-27. These pensions, however, are decreasing both in number and cost, while what might be called the social pensions are increasing steadily. The total cost per head of the European population of the combined pension systems was the same in both years, £1 16s. 9d.¹

Some interesting data are furnished concerning various pension systems. Pensions for the aged were established in 1898, for those who met certain qualifications as to age, character, residence, and income. The age fixed was 65 for men and 60 for women, with lower ages for those having two or more dependent children under 15. The amount of the pension has been changed several times; in 1927 the maximum general rate was £45 10s. per annum. The number of pensions granted each year, and the number in force at the end of each year since the act became operative are shown in the following table:

OLD-AGE PENSIONS GRANTED AND IN FORCE AT END OF EACH YEAR, 1899 TO 1927

Year	Number of pensions granted	Number in force at end of year	Year	Number of pensions granted	Number in force at end of year
1899	7,487	7,443	1914	3,320	18,050
1900	4,699	11,285	1915	3,158	19,352
1901	2,227	12,406	1916	2,268	19,804
1902	1,694	12,776	1917	1,823	19,697
1903	1,391	12,481	1918	2,146	19,960
1904	1,063	11,926	1919	2,235	19,872
1905	1,210	11,770	1920	2,289	19,993
1906	2,075	12,582	1921	2,152	19,837
1907	2,031	13,257	1922	2,553	20,491
1908	1,740	13,569	1923	2,781	21,181
1909	2,113	14,396	1924	2,549	21,468
1910	2,304	15,320	1925	2,654	22,062
1911	2,399	16,020	1926	3,100	22,905
1912	2,318	16,649	1927	3,302	23,751
1913	2,072	16,509			

This shows a total of 73,153 pensions granted during the period. Something over one-half, 39,692 or 54.3 per cent, of the pensioners had died, and in the case of 9,707 the pension had been canceled for one reason or another, leaving on the roll at the end of 29 years of operation a total of 23,751 pensioners, or approximately one-third (32.5 per cent) of those to whom pensions had been awarded.

The act establishing pensions for miners was passed in 1915. Under its terms pensions are payable to miners meeting certain requirements as to residence, character, and occupation, who have become totally incapacitated for work owing to miners' phthisis (pneumoconiosis) contracted while working as a miner in New Zealand. The number of pensions granted each year and the number in force at the close of the year are shown in the table following.

¹ At par, pound sterling=\$4.8665, shilling=24.3 cents, and penny=2.03 cents; exchange rate approximately par.

MINERS' PENSIONS GRANTED AND IN FORCE AT END OF EACH YEAR, 1916 TO 1927

Year	Number of pensions granted	Number in force at end of year	Year	Number of pensions granted	Number in force at end of year
1916-----	120	120	1923-----	96	544
1917-----	153	238	1924-----	88	580
1918-----	91	270	1925-----	111	607
1919-----	82	240	1926-----	96	640
1920-----	237	415	1927-----	84	668
1921-----	107	474	Total-----	1,343	-----
1922-----	78	506			

Of those to whom pensions had been granted during this period of 12 years, practically one-half (49.7 per cent) were still on the rolls at the close of the period. Of those who had been removed, 485 had died, and 190 had improved in health, moved away, or for some other reason had been dropped. If the number of pensions granted may be taken as indicative of the prevalence of miners' phthisis, evidently the efforts of the health authorities to stamp it out are having some effect; during the first six years covered, 790 pensions were granted, as against a total of 553 for the remaining six years.

CHILD ENDOWMENT

Australian Commission on Child Endowment

THE Australian Worker, in its issue for September 14, 1927, announces the appointment of a royal commission to consider the subject of child endowment. At a recent conference between representatives of the Federal and the State Governments, it was pointed out that the action of New South Wales in introducing a system of child endowment had brought about an anomalous situation, since a man working under a Federal award in New South Wales might fare quite differently from one working under the same award in another State, and that there should be some effort to reach uniformity. The appointment of a commission to consider the matter from the point of view of the Commonwealth as a whole was agreed upon as a desirable step. The commission consists of five members, one of whom is a woman. It is instructed to consider the following matters:

The general question of the institution of a system of child endowment or family allowance in Australia, with particular reference to its social and economic effects, and if the institution of such a system is recommended.

The methods by which such a system could be established.

The relation of such a system to wage fixation, having regard to the interests of the wage earner, of industry generally, and of the community.

The application of a system of child endowment or family allowances to persons whose wages are not regulated by law or who are not engaged in industry as wage earners.

The limit of income, if any, subject to which payments by way of child endowment or family allowances should be made.

The methods of financing and giving effect to a system of child endowment or family allowances with particular reference to the practicability and desirability of providing the necessary funds from public revenues, from industry, or from both sources, and in what proportions and upon what principle.

The methods of administering such a system.

The cost of such a system, including administrative expenses and reserves if thought necessary.

The legal method of giving effect to any system recommended, with particular reference to the distribution of the Commonwealth and State powers.

Any matters of public interest which may arise as the result of the institution of a system of child endowment or family allowances.

Basic Wage and Proposed Child Endowment in Western Australia¹

ON JUNE 7, 1927, the court of arbitration at Perth set the basic wage for the year 1927-28 at £4 5s.² per week for adult males, and £2 5s. 11d. for adult females, with proportionate payments for periods of employment lasting less than one week. These figures are the same as were set for the preceding year, the rate for males being calculated on the following allowances for the main items in the cost of living:

¹ Australia (Western Australia). [Court of Arbitration.] Basic wage declaration for the year under industrial arbitration act, 1912-1925] and reasons of the court. Perth, 1927.

² At par, pound sterling = \$4.8065, shilling = 24.3 cents, and penny = 2.03 cents; exchange rate nearly par.

	£	s.	d.
Food.....	1	16	0
Rent.....	1	0	0
Clothing.....		13	6
Miscellaneous.....		15	6
	4	5	0

The representatives of the workers had pressed for a higher basic wage, claiming that the family for whose needs it was calculated ought to be considered as consisting of five members, rather than of four. In announcing the decision, Justice Dwyer reviewed briefly the reasons which had led last year to fixing the number of four (see Labor Review, October, 1926, pp. 208, 209), and declared that no evidence had been brought forward tending to show that those reasons were invalid. He admitted that there were a number of families, roughly estimated as amounting to 10,390, in which there were three or more children under 14, but suggested that the proper way of providing for these was not through a basic wage, applicable to every worker, but through a plan of child endowment, by which provision for the children in excess of two would go directly to the families in which they were found. The Government actuary had been asked to draw up a memorandum on this point, and the justice's remarks were based on this.

The memorandum is given in full in the pamphlet containing the court's decision. On the basis of the 1921 census the actuary calculates the number of children under 14 in the State who are found in families having more than two such members. This number is modified to allow for population growth, and for the deduction of those whose parents do not belong to the wage-earning class, or who, for other reasons, would not be eligible for the proposed allowances. It is finally estimated that provision would probably have to be made for 57,442 children. Taking the New South Wales act as a model, it is suggested that the allowance be 5s. a week, or £13 a year, for each child.

In addition to the cost of the actual endowment, provision has to be made for the cost of administration and reserves to cover differences in the actual number of children. In New South Wales administration costs were estimated at 3 per cent, and reserves at 7 per cent of the endowment, and if similar provision is made in Western Australia the total cost will be:

Endowment of £13 per annum per child.....	£746, 746
Cost of administration.....	22, 402
Reserves.....	52, 272
	821, 420

This amount, it is suggested, might be raised by a rearrangement of the wage and salary bill of the State, by a levy on employers, or by a combination of these means. The proposition is made that employers might be required to contribute toward an endowment fund 2½ per cent of their total pay roll, while employees should be called upon for a contribution of 2s. 3d. per week per adult male employee. This, estimating the total wage and salary bill at £16,401,840, would give £410,046 per annum from employers, while the adult male employees, numbering 72,025, would contribute £421,346, making a total of £831,392, or somewhat more than the amount required. Of the amount to be paid by the employers, the sum of £321,671 would be a charge on private employers, leaving the balance of £88,375 to be paid by the central and local governments in their capacity of employers of labor.

TRAINING AND PLACEMENT OF THE HANDICAPPED

Fourth National Conference on Vocational Civilian Rehabilitation, 1927

VALUABLE information concerning the restoration of the handicapped to industry is contained in the Report of the Proceedings of the Fourth Conference on Vocational Rehabilitation of the Disabled Civilians, which was held at Memphis, Tenn., March 28-31, 1927.

Percy Angove, State supervisor of vocational rehabilitation of Michigan, declared that the success or failure of rehabilitation services hinges upon the administrative procedure employed and emphasized the need for basing rehabilitation upon social economy. An essential part of the work is the making of studies and surveys by the State.

The necessity for scientific vocational counsel in rehabilitation work was pointed out by John Aubel Kratz, chief of the vocational rehabilitation service of the Federal Board for Vocational Education.

According to D. M. Blankenship, supervisor of vocational rehabilitation of Virginia, "The greatest curse of rehabilitation work so far has been this thing of trying to keep down the per capita cost of training. * * * These \$1.45 cases don't amount to 25 cents' worth."

In a discussion on State plans for rehabilitation work the question was brought up as to whether or not it was advisable to publish State plans. Some of the drawbacks in devising too definite or too restrictive State schemes were also suggested.

Rehabilitation service should reach to every part of the State regardless of remoteness, in the opinion of Ira W. Kirby, State supervisor of vocational rehabilitation of California. He also believed that "States should cooperate with one another for the supervision and training of trainees from another State when the former State has not the proper training facilities." He thought it justifiable for States to adopt a residential requirement for rehabilitation service, each State to determine its own requirement.

The great need for follow-up work of vocationally reestablished cases of arrested tuberculosis was stressed by Dr. H. E. Kleinschmidt, medical secretary of the National Tuberculosis Association.

In discussing the selection, training, and direction of rehabilitation workers, Dr. R. M. Little, chief of the bureau of rehabilitation of New York stated:

Above all other qualifications that are needed in this work of technique and skill and experience is that of an abiding spirit within the heart which causes us not only to have human sympathy but human sympathy that can be skillfully applied, that will sustain us in skillful and sincere action, and for a period of years, and a sincere motive power within that wants to help our fellow men

and restore them to gainful occupations, and open before them the doors of hope and of cheer in life. That is what is needed more than all things, and some way or other that is something we can only in a slight degree communicate to others.

Some preliminary findings of an investigation into the occupational opportunities for the handicapped in certain Wisconsin industries were presented by W. F. Faulkes, supervisor of vocational rehabilitation in that State.

Among other subjects taken up at the same session were the advisability of including, in a survey of job opportunities, unskilled work for which no formal or extended training is possible; State surveys of rehabilitation facilities; an analysis of the methods of welfare agencies in a State and their limitations in cooperating with the rehabilitation service; methods of analyzing the medical and surgical facilities in a State and method of cooperative relationships with them.

The extent of the adoption throughout the country of the aims of vocational guidance was declared to be "astonishing" by Dr. Harry D. Kitson, professor of education, teachers' college, Columbia University. In his judgment, one of the most encouraging lines of research for the solution of the problems of vocational guidance is in the field of follow-up.

Dr. Don D. Lescohier, professor of economics, University of Wisconsin, suggested "the adjusting of jobs to people less than perfect may be as important to success in this [rehabilitation] work as the adjusting of people to jobs."

Speaking to a body of engineers in Milwaukee last winter, I maintained that our industries must utilize the services of men of all types and qualities, not simply of the best. They must use, as best they may be used, the services of men lacking in strength, of men lacking in good judgment, of men lacking in initiative, special knowledge, and sense of responsibility. They must use men whose activity has begun to decline, but who have years of useful service in them. They must use cripples. They must use many who are mentally defective. I pointed out that the general tendency of the scientific-management school in all its branches had been to create tasks, working conditions, and wage incentive that were adjusted to excellent labor material rather than the old, the slow, the defective, or the subnormal, and that modern employment management has had the same effect. The labor managers have been thinking in terms of selecting the best and discarding the rest of the labor force as far as their own plants are concerned.

The engineers and the employment managers can do more than any other executives in our industries to widen the employment possibilities of the less promising workers, and these two groups are composed, for the most part, of high-minded men, people with ideals who will respond to this challenge once it is pressed home into their consciousness.

In summarizing the trends in vocational rehabilitation H. B. Cummings, agent of the vocational rehabilitation service of the Federal Board of Vocational Education considered the following as notable: 1. The trend toward quality production rather than quantity production; 2. The trend toward specialization of function as against diversification of function; 3. The trend toward general cooperation rather than special cooperation; 4. The trend toward physical restoration; 5. The increasing trend toward training.

A paper by Dr. W. D. Partlow on "Mental pathology in vocational rehabilitation" included the following note of warning:

The same stress and strain of modern life which allows no time for mental repose and solitary reflection and far too little time for sleep, all so necessary, not only

is constantly establishing instability and predisposition, but at the same time the same facts and conditions are contributing to the immediate and exciting causes of mental disease and maladjustment.

Ethelbert Stewart, United States Commissioner of Labor Statistics diagnosed the lump-sum settlement as the "germ of death of the workmen's compensation laws in the United States," and unless it is eliminated, "it is going to do its deadly work." He pleaded with the delegates to be very cautious in their efforts to secure workmen's compensation funds for rehabilitation and retraining purposes and to be even more and more vigorous "in [their] efforts to secure an entirely distinct and independent machinery and funds for rehabilitation and retraining purposes."

In all workmen's compensation and rehabilitation problems, "the motivating force must be the restoration of the disabled employee to remunerative occupation," is the conclusion of Voyta Wrabetz, commissioner of the Wisconsin Industrial Commission. "The man must be given that which industry has taken from him, his earning capacity and his chances for improvement and promotion, not as an act of charity but as his right."

Vocational Rehabilitation in New Jersey

THE September, 1927, issue of the Industrial Bulletin of the New Jersey Department of Labor contains a report of the vocational division of the rehabilitation commission of the State of New Jersey for the year ending June 30, 1927, that is of more than passing interest.

This report shows that during the fiscal year the vocation examiners registered and surveyed 1,346 physically handicapped, and that 711 of these were vocationally rehabilitated during the year. Of this number 662 were males and 49 were females. Of the number rehabilitated, 474, or 66½ per cent, were credited to the classification of industrial or employment accidents, and 79 to public accidents, while 131 were attributable to disease, and 27 were noted as congenital.

Three methods were used for assuring to the physically handicapped employment of a remunerative character, and data compiled for this purpose show that rehabilitation was accomplished in 20 cases through school training, in 121 cases through employment training, and in 570 cases through job restoration. The age groups show that 103 of those rehabilitated were under 21, 181 between 21 and 30, 186 between 31 and 40, 122 between 40 and 50, and 119 were 51 years of age and over.

Leg, arm, and hand injuries were responsible for considerably more than half of the disabilities recorded.

It is noted that of the 711 cases rehabilitated 281 had received no schooling beyond the sixth grade, 87 were reported as having acquired no education, and 35 reported schooling other than the grades.

Of the 1,346 registered cases, 635 were in abeyance at the close of the fiscal year for investigation, and 24 of this number were in school training.

Industrial Aid for the Blind in Argentina

THE October, 1927, issue of the Pan American Union Bulletin contains a description of the educational work for the blind carried on in Argentina.

The Argentine Institute for the Blind is now under the direction of the well-known educator Mr. J. Ulises Codino, who was sent by the Argentine Government to Europe to study the most advanced methods of teaching the blind. The institute has a class similar to a kindergarten, elementary grades, a music school which compares favorably with the best academies of music, and a craft school which equips these unfortunate students with a trade or the knowledge of some practical art, thereby fitting them for useful work. Besides the classrooms and workshops the institute includes several museums, a gymnasium, a music hall, and gardens.

The students of printing set up the textbooks of the institute, whose printing shop, equipped with all the necessary machines, turns out each year over 1,000 pamphlets and textbooks, besides other printed matter.

The report states that the occupation of piano tuner and repairer has been found to be one of the most profitable for the blind. This trade is taught in the institute by a blind teacher, who takes his pupils in turn with him to assist in the work he does outside the school, since it is not possible to have pianos of all makes in the institute.

In one workshop men are taught to make wicker articles, brooms, brushes, and dusters, and to cane chairs. A new course in massaging has been added recently to the institute's curriculum. In Japan and all European countries the profession of masseur or masseuse is reserved for the blind, who are, generally speaking, well paid and very much in demand.

Until the middle of the last century the blind poor of Argentina had to beg on the streets for their living, since they received no education of any nature. According to the last census in Argentina the blind numbered 5,351 nationals and 1,505 foreigners. It is hoped that in time this institution will be in a position to care for all the blind in the country.

The trend toward employment among the blind in Argentina is favorable. In 1926 there were 1,174 blind workers in the country, and in 1927 there were 1,219. The number of blind workers in Argentina increased from 1926 to 1927 by 3.8 percent. The increase in Argentina in 1927 over 1926 was 1.6 percent. The number of blind workers in Argentina in 1927 was 10.2 percent of the total number of workers in Argentina. The "Pan American Union Bulletin" included the following note of warning:

"The social unrest and strain of modern life which allows no room for the development of healthy recreation and the long hours thus become a serious problem."

COOPERATION

Twelfth International Cooperative Congress¹

THE twelfth congress of the International Cooperative Alliance was held in Stockholm, August 15-18, 1927. There were in attendance 424 delegates representing 28 countries, besides 11 representatives of European governments and 3 fraternal delegates from various international organizations.

Opening remarks were made by Albin Johansson of the Swedish Cooperative Union, the Swedish Minister of Foreign Affairs, and the two vice presidents of the alliance, E. Poisson and A. Whitehead. A message from the chief of the economic and financial section of the League of Nations commended the work done by the alliance and expressed the hope that it would join with "other great international organizations in helping to inform and interest and secure the effective influence of the great public who look to it for guidance."

Sir George Paish, representing the International Committee for the Promotion of Universal Free Trade, pointed out that "we are face to face with a situation in which the sale of products has become a matter of great difficulty and in which the creation of fresh credit is approaching its limits—a situation which, if left unrectified, must in the not distant future entail an almost complete breakdown of trade and of credit. If nations can not sell their goods and can not buy on credit the produce they need for their sustenance, unemployment and starvation on a stupendous scale must inevitably result."

An attempt by the Russian delegation to add Russian to the official languages of the alliance was defeated as was also the proposal to adopt Esperanto as the only language of the congress.

Representation on Central Committee

THE maximum number of representatives of any country on the central executive committee has previously been seven. Because of the protest of Russia that it is not one country but a union of countries, it had for a short time been allowed 14 representatives. Such special treatment was, however, not regarded with favor by the congress, which accepted a motion of the Czechoslovak delegation raising the maximum representation for all countries to 14, but providing that when, because of such considerations as expense, etc., any country was unable to send its full quota of representatives, its full voting power could be exercised by a smaller number of delegates. Hereafter, each national cooperative organization will be allowed one representative by virtue of its membership in the alliance and an additional representative for each £100 of subscription to the alliance, up to the maximum of 14.

¹ Data are from International Cooperative Bulletin (London), September, 1927; consular report of Aug. 26, 1927; and Cooperation (New York), October, 1927.

Problems of Cooperative Organization and Policy

THE urgent necessity, if cooperation is to exercise its potential strength, of the accumulation of resources within the movement to the end of making it independent of private capital was emphasized in a resolution reading as follows:

This congress draws the attention of the consumers' cooperative organizations of the International Cooperative Alliance to the importance of adhering to the Rochdale principle of cash payments, not only in regard to the sales of the societies, but also in the purchase of goods by the society. Experience has shown that the cooperative organizations which have developed their activities with cooperative capital, and have avoided dependence on banks and other financial institutions, have been able to overcome even those crises which have had such a paralyzing effect on enterprises dependent on credit. The great development of the British cooperative movement shows, amongst other things, how slender resources grow irresistibly when used in this manner and result in great benefit.

The congress is further of opinion that division hinders the effectiveness of the cooperative movement, and it, therefore, urges the cooperative movement of every country to aim at unity, with one consumers' society in each locality and the centralization of these societies into organizations which are common to all the societies of the country.

Each local society must feel that it is part of the whole movement and subordinate itself to the interests of the whole. The congress is of opinion that the cooperative movement of a country will be of the greatest benefit to the consumers if all societies collaborate and endeavor, as far as possible, to solve simultaneously the same question, and if their activities are concentrated on questions which are of common interest to all consumers.

As these are questions of special importance to the future development of the cooperative movement, congress urges the national organizations and local societies in membership with the International Cooperative Alliance to discuss them carefully and communicate the result to the general secretary of the International Cooperative Alliance.

In cases where a departure from these methods is based on the conviction that they are unsuitable, a careful explanation of the attitude adopted is desired, and where the economic independence and united action of the cooperative movement is considered desirable, it should be stated whether these wishes have been realized; if not, the nature of the measures to be adopted to bring about their realization should be explained.

The congress charges the general secretary of the International Cooperative Alliance to submit a report to the next international congress on the information which may be sent to him.

The importance of close relations between consumers' and agricultural cooperation was emphasized. A resolution adopted by the congress urged (1) the development of exchange and trading relations between the two branches of the movement, both of which are to make the greatest possible reduction in handling costs, thus enabling the consumers' cooperatives to compete with private enterprises and to pay fair prices for agricultural products; (2) the appointment of joint committees for the handling of special problems, for educational purposes, etc.; (3) the development of cooperative savings and the eventual establishment of cooperative banks; and (4) such action by the executive committee of the International Cooperative Alliance as may seem advisable for the furthering of these objects.

Other Action

OTHER resolutions declared for free trade unhampered by customs barriers; provided that no country or union of countries should exercise more than one-fifth of the total voting power of any cooperative congress, the object being to safeguard the rights of small

countries and prevent undue influence by any large country; provided for the appointment of a committee to consider and prepare a program of future work of the International Cooperative Alliance; and expressed the "unflinching hostility" of the cooperative movement to "all policies, economic or militarist, which may provoke war or raise barriers to the realization of the cooperative program."

A resolution instructing the International Cooperative Alliance to enter into relations with the International Federation of Trade-Unions at Amsterdam and the Profintern of Moscow for the purpose of dealing with questions affecting both trade-unions and cooperative movements was overwhelmingly voted down.

Central Committee and Next Meeting

A CENTRAL committee of 57 members representing 23 countries was elected for the ensuing three-year term. Dr. James P. Warbasse, president of the Cooperative League, was again selected as the representative from the United States.

The next congress will be held in Vienna in 1930.

Making Cooperation More Interesting

IN AN article in the 1927 Yearbook of the Northern States' Cooperative League, Albert Sonnichsen makes a critical examination of the cooperative movement from the perspective furnished by the year that has passed since his retirement from 20 years' connection with the movement.

As he looks back upon the movement his general impression is that of drabness and bleakness. "Not a patch of color to brighten the landscape. I look back the 20 years without recalling one actual thrill. A long succession of meetings, one as dull as the other. Coffee, flour, beans, carloads of canned salmon. Figures, dollars and cents, buzzing. I pick up a cooperative journal, and it puts me to sleep. A low murmur of many voices, but not one human shout of triumph."

Although this is a superficial impression it is the author's opinion that it is just the sort of impression made by the movement upon every casual observer whether member or nonmember, and this he considers "the outstanding weakness of cooperation, a weakness that may eventually prove fatal, should it continue."

Cooperators may complain that cooperation lacks publicity because it opposes advertisers, but this is only part of the truth. Newspapers and journals of popular appeal ignore cooperation because it lacks "human interest." It lacks the dramatic, the vivid, the picturesque elements. "You could as easily dramatize Webster's dictionary as write a novel about cooperation."

Yet this is what people want, simple workers as well as intellectuals. It is this element in the fraternal orders that has made them such a popular institution in this country. If I suggest that all cooperative society members should be made to attend meetings in white nightgowns and red turbans, I may seem absurd—but the meetings would never lack a quorum. And the man who likes to bedeck himself in the regalia of a Bedouin chief and be dressed as Your Most Exalted and Exceedingly Eminent Highness Sir Jimmie Smith isn't necessarily a degenerate. We all have the play-acting instinct more or less. Jimmie has imagination, and he seeks to have it stirred up.

That is just what cooperation does not do to Jimmie's imagination. And Jimmie is even more important to cooperation than the brilliant intellectuals who don't come to us; he drinks thousands of cups of coffee to their one and eats 10,000 cans of baked beans and salmon to their one. How are you going to get hold of Jimmie; not merely to buy a can of beans now and then, but to rally round the banner of the movement, shouting himself hoarse with enthusiasm?

If you succeed in capturing Jimmie's imagination, all the rest will follow; publicity in the magazines and newspapers, brilliant leaders and ultimate success. What holds Jimmie's interest will interest the newspapers, regardless of the advertisers. For if a newspaper has no readers, it will surely get no advertisers.

He points out the human appeal of the Belgian cooperative movement with its beautiful "people's houses," its provision of nurses for maternity cases, wedding cakes for members entering upon matrimony, pensions for the aged, etc.

There is a very constructive suggestion in the Belgian system. It has the human pull. It does even more than awaken the imagination; it twangs the heartstrings. * * *

British and American cooperation is as appealing to the imagination as a hardware store. For all its great social ideals, it is as hard as a marble. Jimmie Smith buys at the co-op, and as long as he has money, he is served. The moment he loses his job, he gets the glassy stare. Even the capitalist grocer around the corner is more human. He does give credit.

The writer points out that cooperation can be humanized, "but imagination is needed, not only on the part of the people, which is there, but on the part of the leaders. The jobless member need not be turned out of the store. He may be taken care of on as sound a basis as that on which the big insurance companies are operated."

He concludes:

Economic determinism is undoubtedly a compelling factor in human destiny; but it pushes, it does not pull. Jimmie Smith will not be interested in changing the social structure until he is desperately hungry, and then he will turn to bloody revolution, not cooperation. But while he has enough to fill his stomach, tobacco for his pipe, and the price of admission to a picture show he isn't going to tear down any fences. Cheaper prices in beans and underwear will not take him a block out of his-way. If you want to attract him, appeal to his heart, his imagination. Also, amuse him; make him laugh. Give him a thrill occasionally. Do this, and he is all yours. Do it long enough and thoroughly, and he will bleed for you at the barricades, if that becomes necessary.

What Cooperative Societies Are Doing to Humanize Cooperation

THAT some societies are making a beginning in humanizing the movement is indicated by other articles in the same yearbook. Thus, the Franklin Cooperative Creamery Association, Minneapolis, has been conducting a nutritional clinic for children of its employees and members. Its chorus, composed of 32 of its male employees, is in demand for entertainments at lodges, churches, etc. It gives an annual concert, usually in one of the Minneapolis theaters. The Franklin band, in existence for the past five years, has a membership of 30, representing all the instruments required for a military band. It is stated that the band, as well as the chorus, is considered "a great asset to the institution, for wherever it appears it makes friends for the Franklin and spreads the gospel of cooperation to all people." The baseball team, also composed of Franklin employees, won the 1926 amateur baseball championship of the city.

In New York City, the Consumers' Cooperative Services has started a cooperative theater, and has inaugurated the plan of establishing lending libraries for its members and patrons.

Employees of the Cooperative Central Exchange, Superior, Wis., men and women alike, have formed a "gala day" troupe which has traveled about presenting a musical comedy with scenes laid in a cooperative store and dealing with cooperation in songs, jokes, and action.

The play is kept from becoming dry through the medium of bringing in pointed jokes, puns, individual song numbers, quartets, etc. There is clog dancing, magic tricks, in fact every conceivable type of vaudeville number, and the chorus girls dance in every now and then, always with a song dealing with cooperative questions, always snappy, yet always with a deep thought embodied in their song. Now they dance in with costumes on which the emblem of the league, the two pine trees on a yellow field, are prominently brought out—then again with a costume made up from the Cooperators' Best flour sacks—always smiling—and executing their little steps with a unity that bespeaks of many tiresome rehearsals.

The cooperative movement, its theory, principles—consumers' cooperatives, the credit question, the importance of loyalty, the value of standardization and centralized effort—all are discussed and commented on in the course of the play. And the audience likes it—they laugh throughout the show and applause is never wanting. In the finale the entire troupe is present on the stage and the curtain drops on their song.

The play has been shown in 16 different cities and towns, playing to audiences ranging in size from 200 to 2,000.

The writer states that it has been valuable to the movement. "For whereas people are not sufficiently interested in our movement to come and listen to speakers they enjoy a show. They are not adverse to hearing cooperative propaganda when it is served them in small doses in the form of songs and repartee."

Cooperative Oil Associations in Minnesota¹

AN INTERESTING development in the cooperative movement that has taken place in the past few years is the invasion of the gasoline and oil business by cooperative organizations. There are now some 52 such organizations in operation in Minnesota alone, all established during the past six years.

These associations operate on a strictly Rochdale basis. Shares are small, usually \$25 each, and an attempt is made to distribute ownership generally among the consumers in the locality to be served by the association. A limited rate of interest is paid on this stock, and after expenses of operation are paid and provisions made for a reserve fund, the remaining profits are distributed among the members in proportion to their patronage. Last year the association at Owatonna paid a patronage dividend of 14 per cent, amounting to \$33,051. "When a cooperative company can turn back to the farmers of a community this amount of cash, there is no question as to the service it has rendered."

The oil business lends itself readily to the cooperative plan. Only a few lines are handled, and the cost of sales is small in comparison with the value of business. It is stated by the deputy commissioner of agriculture of Minnesota, on the basis of financial reports required by law to be made by the associations, that these companies are "uniformly successful."

¹Northern States' Cooperative League. Third Yearbook, 1927. Minneapolis, 1927, pp. 183-189.

The associations have a central association in Minneapolis, organized on a nonstock, nonprofit basis. It is a service organization, which assists the local societies in their bookkeeping and business methods, and acts as their purchasing agent.

The manager of this company says that "the wasteful duplication of service stations and oil trucks has been greatly reduced in communities where cooperative oil companies have been in operation."

The deputy commissioner of agriculture states:

The future of this consumers' movement lies absolutely in the hands of the consumers themselves. They have ample legislation on the Minnesota statute books for their purposes; have the active, even aggressive, cooperation of State officials administering the cooperative laws of this State; have a large clientele thoroughly schooled in cooperative theory and practice and have a large and fertile field for exploitation in consumers' behalf. It is believed that a sound business policy will govern the actions of the officers of all the associations in the future as it has during the period of their operations to date. This will assure a steady and safe growth to the movement and protect society against possible unjust combinations of competitors who may seek to establish unfair prices.

Cooperation in the North Central States

THE 1927 Yearbook of the Northern States' Cooperative League contains much valuable statistical and other information regarding the cooperative movement in the North Central States, from which the following is taken.

Northern States Cooperative League

THE Northern States' Cooperative League, one of the four district educational leagues affiliated with the National Cooperative League, on June 30, 1927, had in membership 27 cooperative societies, 11 fraternal societies and 327 individual members, a gain of 8 societies, from the previous year. The combined membership of the affiliated cooperative societies is 52,828, a gain of 3,652 over 1926; their sales in 1926 amounted to \$9,821,878.

The commercial department of the league, established in the hope that it might eventually develop into a cooperative wholesale for the whole district, had during the three months of 1927 during which it was in operation, sales of \$7,247. The 1927 convention of the league, held July 17 and 18, voted, however, that hereafter the league shall act only as a medium by which its producers' societies can find a market for their goods, by establishing connections with reputable produce houses.

In its endeavor to serve the constituent stores as an employment agency, the league has collected data as to the managers of 140 cooperative stores. Its data reveal that these men have had an average business experience of just under 17 years, of which $6\frac{1}{3}$ years have been spent in cooperative stores. Their average salary is \$160.30 for those who are on a straight salary basis. Fifteen per cent, however, receive other compensation, such as free living quarters, heat, light, water etc. Two or three share in the profits and two receive a commission on sales, in addition to the salary.

The failure of several societies comparatively new in membership with the league has convinced the latter that it should be more strict

in admitting societies to membership, perhaps requiring as a prerequisite that the candidate submit its books and affairs for inspection by the league. "This would offer us certain security against admitting members who fail soon after their admittance and thus cast an undesirable reflection upon our league."

Cooperative Central Exchange

THE Cooperative Central Exchange, of Superior, Wis., is a wholesale society serving a group of some 76 local societies. In existence since 1917, the exchange, with share capital of only \$37,249, in 1926 passed the million mark in sales (\$1,017,544), and has accumulated a surplus-reserve of \$8,501. Besides its wholesale and jobbing activities, the exchange owns and operates a bakery whose sales in 1926 were \$70,071.

The association has been active in educational work, having a special educational department which provides lectures, speakers, leaflets, etc., and has held seven courses for the purpose of training students to be managers of cooperative stores.

An auditing department is also maintained.

Affiliated Societies

THE report contains much excellent statistical data regarding both the Cooperative Central Exchange and its affiliated societies. Due to the centralized system of auditing the accounts of the member societies, a uniformity has been obtained in methods of accounting which makes for greater comparability of data, as well as disclosing clearly the financial status of each society.

The 55 local societies covered by the tables had at the end of 1926 14,710 members, total resources of \$1,987,373, and share capital of \$612,624. Their sales for the year aggregated \$3,564,643, and their net trading gain \$136,143. Sales increased from 1925 to 1926, on the average, 8.75 per cent. The expenses of these societies averaged 11.96 per cent of net sales.

The majority of the societies affiliated with the exchange are rural organizations and 33 of 56 have a membership composed entirely of farmers.

Fourteen of the 56 stores are practically on a cash basis, 4 have accounts payable amounting to less than two weeks' average sales, and 18 amounting to less than a month's average sales. As one of the outstanding causes of failure among cooperative stores is the unwise extension of credit, thus reducing the funds available for business, the experience of some of these societies with regard to the credit policy is interesting.

The Orr Farmers' Cooperative Trading Co. in July, 1926, decided, "by a great majority, to go on a cash basis, without any further education or anything of that sort." It was expected that sales would fall off at least temporarily as a result of this policy. Contrary to expectations, however, new business more than offset the losses, the accounts receivable have been reduced from \$3,000 to \$1,000, and the society has flourished to such an extent that it has been enabled to erect a new store building and is also constructing a branch store.

The society at Hancock, Mich., learned through experience that "credit trade is one of the greatest obstacles in the way of the progress of the cooperative societies," and by a unanimous decision of a membership meeting decided to place the store on a strictly cash basis, regardless of consequences. Trade decreased the first month after this action was taken, but increased decidedly thereafter.

Another store, at Superior, Wis., reports that "on March 1 our store was put on a strict cash basis. * * * Ever since this change our sales have been on the increase. This is a good lesson to those who defend the credit business for cooperative stores."

An interesting example of the "never say die" spirit, as well as of the value of having a central organization equipped with expert knowledge, is revealed in the account given below of the cooperative society at Mass, Mich.

Our society came into existence in 1913 as one of the consequences of the hard-fought and bitter struggle of the big Michigan copper strike.

In spite of the many difficulties encountered and a continuous lack of working capital, a fairly rapid progress was made in the beginning. But, partly on account of the inexperience of those immediately connected with the management, and partly due to the abnormal conditions following the World War, our society, whose finances had never had any opportunity to stabilize, soon met with serious reverses.

Like so many other similar organizations during the trying years of 1920-1923, our society suffered from almost all the evils known to retailers. We had accumulated a large stock of slow-selling merchandise; we had no money to use in the business, the capital having been tied up in the stock of merchandise and the accounts receivable; we could get no more credit from the wholesale houses, and, worst of all, we lost practically all of the confidence of the consumers.

A branch store had been organized at Ontonagon which was operated on a profitable basis but did not bring enough money to cover all the losses of the main store in Mass. The reverses continued until a crisis was reached in the summer of 1923. We had lost almost three-fourths of the \$9,000 paid-in capital; we owed wholesalers over \$14,000; we had no money, and the auditors told us of another \$2,000 loss by the Mass store.

But through all these reverses this society survived only because it had a group of faithful supporters. Small indeed was this group, but they were people who were willing to do everything, who suffered and sacrificed year after year that this organization might live. And with the aid of the Cooperative Central Exchange this society came out of the crisis of 1923 a winner. Its reverses began to turn into successes. From that time on a rapid progress has been made.

It is almost unbelievable that this organization, which only three and a half years ago was in the throes of a death struggle, has been able to almost double its sales, reaching nearly \$150,000 last year; that it has paid all its accounts to wholesalers; ridden itself of the old obsolete stock; bought a new stock of up-to-date merchandise, paying for it almost as fast as it comes in, and saving practically all discounts; that it is now paying proper interest on all paid-in capital and rebates on purchases by consumers; that during these three and a half years it has saved to its customers over \$30,000.

LABOR LAWS AND COURT DECISIONS

The Sherman Antitrust Act and Labor: The Coronado Case

LITIGATION which started in 1914, when labor troubles developed following the attempt of the manager of the Coronado Coal Co. to change several of his mines from a union to a non-union basis, and which was twice before the United States Supreme Court, was finally settled out of court on October 17, 1927.

In 1914 the Coronado Coal Co. and seven other mining corporations controlled by the Bache-Denman Coal Co. were operated as a unit in Sebastian County, Ark. Mr. Bache, as manager, had operated the mines for a number of years with union labor and in the spring of 1914 was operating under a District No. 21 contract and scale of wages which did not expire until July 1, 1914. In March of that year he determined to run the mines on a nonunion or open-shop basis and notified the president of the District Union No. 21 that he intended to do so. To avoid the charge of a breach of the union scale a contract was made with a corporation having \$100 capital and controlled by Bache, by which it agreed to run two of the mines.

Two of the mines were shut down and Bache prepared to open them on an open-shop basis on April 6, 1914. Anticipating trouble, he employed guards, purchased rifles and ammunition, gathered non-union men, and notified employees occupying company houses that they must vacate unless they remained in his employ. A protest meeting was held by the union miners at which a committee was appointed to visit the superintendent and insist that the mine remain union. The committee was attended by a large body of union miners who assaulted the mine guards, took their guns away, and injured a number of them. The employees deserted the mine, which filled with water upon the stopping of the pumps.

An injunction was obtained in the Federal district court against the union miners and others. Preparations were begun to resume mining with nonunion miners under the protection of the United States deputy marshals. After some weeks the United States marshals were withdrawn, leaving only private guards to protect the property. The water had been pumped out and the mining and shipping of coal were about to begin when, before daybreak on July 17, a large force of union miners and their sympathizers, armed with rifles paid for by the District No. 21 organization, began an attack upon the men brought together to work the mine. Two of the employees of the mine were killed and all of the property on the premises was destroyed.

Immediately after the destruction of the property the district court appointed a receiver for the mines. The receiver of the Coronado Coal Co. and other companies in the mining group brought an action at law for damages against the United Mine Workers of

America and its officers, District No. 21 and its officers, 27 local unions in District No. 21 and their officers, and 65 individual defendants for conspiracy to restrain and prevent plaintiffs' interstate trade in coal in violation of the first and second sections of the Sherman Antitrust Act. The complaint was filed on September 1, 1914, in the District Court of the United States for the Western District of Arkansas. The United Mine Workers countered with the claim that, even assuming the truth of the facts set out in the complaint, the facts shown were not sufficient in law to sustain the action. The district court ruled in favor of the unions, but in the United States Circuit Court of Appeals the judgment of the district court was reversed and the case remanded. (*Dowd v. United Mine Workers of America*, 235 Fed. 1, decided July 21, 1916.)

The case then went to trial in the district court and resulted in a verdict of \$200,000, which amount was trebled by the court in addition to allowing a counsel fee of \$25,000 and interest on the award to the date of the judgment. The United States Circuit Court of Appeals reversed the judgment as to interest, but in other respects affirmed it. (*United Mine Workers of America et al. v. Coronado Coal Co. et al.*, 258 Fed. 829, decided April 28, 1919.)

The case then went to the Supreme Court of the United States, five principal questions being presented:

1. Was there an improper joining of parties bringing the action? The plaintiffs included a group of mine companies, consisting of five operating companies and four nonoperating companies interested in the operating companies either by lease, contract, or by ownership of all or a majority of their stock. The court held that there was no misjoinder.

2. As the United Mine Workers of America, District No. 21, and the local unions were unincorporated associations, were they subject to suit? The court answered this question in the affirmative, stating that though an unincorporated association of persons at common law could sue or be sued only in the names of its members, "equitable procedure adapting itself to modern needs has grown to recognize the need of representation by one person of many too numerous to sue or to be sued, and this has had its influence upon the law side of litigation, so that, out of the very necessities of the existing conditions and the utter impossibility of doing justice otherwise, the suable character of such an organization as this has come to be recognized in some jurisdictions." The court added that its conclusion as to the suability of the defendants was confirmed in the case at bar by the wording of sections 7 and 8 of the antitrust law.

3. Was there any substantial evidence to show that the international union initiated, participated in, or ratified the interference with the business of the companies from April 6, 1914, to July 17, 1914? The court answered this question in the negative, saying that there was "nothing to show that the international board ever authorized it, took any part in preparation for it or its maintenance. Nor did they or their organization ratify it by paying any of the expenses. * * * The district made the preparations and paid the bills."

4. Was there any evidence to show that the conspiracy alleged was a conspiracy to restrain or monopolize interstate commerce? The court answered this question by stating (a) "the authority is put by

all the members of the District No. 21 in their officers to order a strike, and if in the conduct of that strike unlawful injuries are inflicted, the district organization is responsible and the fund accumulated for strike purposes may be subjected to the payment of any judgment which is recovered," but (b) "coal mining is not interstate commerce and the power of Congress does not extend to its regulation as such" and there was no evidence submitted to the jury upon which they could find that the acts of District No. 21 and its companions were committed by them in a conspiracy to restrain or monopolize interstate commerce.

5. Did the lower court err in its supplemental charge to the jury? The court said that the conclusions as to questions 1-4 made it unnecessary to examine this question.

The judgment for damages was reversed and the case sent back to the district court for further proceedings in conformity to the above opinion. (*United Mine Workers of America et al. v. Coronado Coal Co. et al.*, 259 U. S. 344, decided June 5, 1922.)

A new trial was had in October, 1923, which resulted in a judgment favorable to the unions and which was affirmed by the circuit court of appeals. (*Findley v. United Mine Workers of America*, 300 Fed. 972, decided July 12, 1924.)

The case then went to the Supreme Court of the United States again. The companies contended that they had supplied at the second trial the necessary links lacking at the first trial, namely, evidence showing participation by the international union in the conspiracy and wrongs done and sufficient evidence to show an intentional restraint of interstate trade and a violation of the antitrust act.

The court, however, again speaking through Mr. Chief Justice Taft, held to its former opinion as to the international union in spite of the new evidence and decided that none of the evidence tended to establish the participation of the international in the strike and disturbances. Because of the new evidence as to the attitude and purpose of the leaders and members of District No. 21 between April 6 and July 17, 1914, shown at the second trial, the court held that "the purpose of the destruction of the mines was to stop the production of nonunion coal and prevent its shipment to markets of other States than Arkansas, where it would by competition tend to reduce the price of the commodity and affect injuriously the maintenance of wages for union labor in competing mines." The court stated the law to be that "mere reduction in the supply of an article to be shipped in interstate commerce by the illegal or tortious prevention of its manufacture or production is ordinarily an indirect and remote obstruction to that commerce. But when the intent of those unlawfully preventing the manufacture or production is shown to be to restrain or control the supply entering and moving in interstate commerce or the price of it in interstate market, their action is a direct violation of the antitrust act."

The judgment in favor of the international union was affirmed but reversed as to District No. 21 and other local unions and the individual defendants, and the case was sent back as to them for a new trial. (*Coronado Coal Co. et al. v. United Mine Workers of America et al.*, 268 U. S. 295, decided May 25, 1925.)

On October 17, 1927, the case was dismissed by order of court after an adjustment had been made between the parties.

Enforcement of Labor Laws in Argentina

A COMMUNICATION from the American ambassador, Robert Woods Bliss, at Buenos Aires, dated September 21, 1927, disclosed the fact that on September 14 the Argentine Chamber of Deputies questioned the Minister of the Interior as to the alleged non-enforcement of the law (No. 11388) prohibiting night work in bakeries.

The minister stated that, in spite of the number of violations, his department had exerted every effort to enforce the law since last March when it became effective. He stated further that the courts moved very slowly and his department had no authority to close the bakeries of offenders, but could only denounce them to the courts.

It was stated in the debate which followed that the lax enforcement of the laws protecting labor was due to a lack of popular discipline or social consciousness. Recommendations were made that the laws should be strengthened and the authority and personnel of the labor department increased.

Protective Legislation for Commercial Employees in Salvador¹

THE Legislative Assembly of Salvador recently passed a law, which became effective on June 17, 1927, for the protection of persons working in commercial undertakings, repealing the act promulgated on May 29, 1926. The new law fixes the maximum daily hours of work at 8 for men and 7 for women and minors. Overtime may be worked in pharmacies, transportation, and other services of public necessity but must be compensated. It provides for a weekly rest day and an annual vacation of at least 15 days with pay. Unjustifiable absence from work entails a corresponding deduction from wages, but in cases of duly certified illness an employee has a right to 30 days' sick leave with full pay, 30 days' leave with half pay, and another 30 days' without pay before the employer can fill his place. If the employee's illness was contracted in the discharge of duty he shall be duly compensated.

After one year's service employees who are expectant mothers are entitled to three months' leave with half pay, two months before and one month after childbirth. They are to be allowed daily rest periods during working hours to nurse their children.

The law further provides that every individual or corporation engaged in a commercial enterprise shall employ at least 80 per cent national labor and that the employer shall pay the employee a month's salary in case of unjustifiable discharge. The provision in the old law establishing the workers' compulsory savings fund has been omitted. A report from American consul W. J. McCafferty, at San Salvador, dated June 27, 1927, stated that it was extremely difficult to carry out this provision of the former law, and even the employees for whom it was designed were opposed to the savings fund.

The rights conferred on commercial employees by this law can not be renounced, consequently any contract to the contrary is null and void.

Employers violating the provisions of this law are liable to a fine of from 25 to 500 colons² according to the nature of the offense.

¹ Diario Oficial, San Salvador, June 17, 1927, pp. 1041, 1042.

² Colon at par = 50 cents; exchange rate varies.

WOMEN IN INDUSTRY

Trend of Women's Wages in Ohio

UNDER this title a private organization, the Information Bureau on Women's Work, of Toledo, has recently published a study based on statistics collected but not published by the State. Teachers, professional women, and women owning their own businesses are not included, the study dealing with a total of 281,112 employed women, of whom 176,600 were classed as wage earners, 32,553 as saleswomen (not traveling), and 71,959 as engaged in clerical occupations. A comparison of the wage rates of men and women in the same occupational class shows the familiar difference in distribution, the great majority of the men being in the higher and of the women in the lower earnings groups. Thus, the group earning \$25 and over a week contained 70 per cent of the male wage earners, 73.6 per cent of the salesmen, and 80.4 per cent of the men in clerical occupations; but only 10 per cent of the female wage earners, 9.1 per cent of the saleswomen, and 33.6 per cent of the women in clerical work.

Income depends not only on wage rates but also on steadiness of employment, and in this respect the women fared worse than the men. A comparison of relative irregularity of employment was made by taking for both women and men the maximum and the minimum number employed during the year, and calculating the percentage of deviation. This gives the following results:

COMPARISON OF PER CENT OF DEVIATION FROM THE MAXIMUM OF EMPLOYMENT FOR MALE AND FEMALE WORKERS

Year	Wage earners		Clerical employees		Salespeople	
	Men	Women	Men	Women	Men	Women
1923	12.9	9.0	6.4	6.3	12.1	31.8
1924	7.7	7.2	1.1	1.9	9.4	29.2
1925	11.8	10.1	3.9	5.1	10.2	31.2

It will be seen that among the wage earners the women had somewhat the better of the men in each year covered, the greatest difference being found in 1923, that among the clerical employees there is not much difference though the women have a little the worse showing, but that among the salespeople the difference is marked, the disparity being greatest in 1925.

Trend of Rates for Women Aged 18 and Over

IGNORING occupational classification, the following table gives the distribution by wage rates of the total number of woman workers for the period 1923-1925:

DISTRIBUTION OF WOMAN WORKERS, AGED 18 AND OVER, BY WAGE GROUPS

Weekly wage rate	Number of women reported			Per cent of total		
	1923	1924	1925	1923	1924	1925
Under \$5.	1,986	2,142	2,304	0.8	0.8	0.8
\$5 and under \$10.	14,174	13,562	15,405	5.7	5.2	5.5
\$10 and under \$12.	25,007	23,843	26,606	9.9	9.1	9.5
\$12 and under \$15.	56,701	58,693	59,347	22.6	21.7	21.1
\$15 and under \$20.	76,751	80,155	85,229	30.7	30.7	30.3
\$20 and under \$25.	40,882	44,456	47,426	16.3	17.0	16.9
\$25 and over.	35,359	40,258	44,705	14.1	15.4	15.9
Total.	250,860	261,109	281,112	100.0	100.0	100.0

It will be noticed that in both 1924 and 1925 there was an increase in the proportion of women in the wage group \$25 and over, which rose from 14.1 per cent in 1923 to 15.9 per cent in 1925. Much the greater part of this increase took place in 1924. The proportion receiving \$20 and under \$25 rose from 16.3 per cent in 1923 to 16.9 per cent in 1925, but all of this increase was made in 1924, a slight falling off from its figures being shown in 1925. The proportion receiving \$5 or less a week remained constant, and the other groups showed slight changes.

Quoting the yearbook of the Department of Commerce to the effect that "the industry and commerce of the United States during 1925 reached the highest levels ever attained in our history," the report calls attention to the fact that even at this peak of prosperity over one-third (36.9 per cent) were employed at rates of less than \$15 a week, "although studies of the cost of living have shown amounts ranging from \$17 a week in the smaller towns, to \$21 a week for the larger centers, as necessary for a 'health and decency' standard."

A study of the women by occupational grouping shows some differences in the changes in distribution by wage rates. Among the woman wage earners, the largest numerical increase from 1923 to 1925 was among those earning \$15 and under \$20 a week; these increased from 49,056 to 55,118, while the proportion they formed of the total rose from 30.9 per cent to 31.2 per cent. Next in order of numerical increase was the group earning \$20 and under \$25, followed by those earning \$25 and over, and those earning \$12 and under \$15. During the period the proportion earning \$12 and over rose from 79.5 per cent to 81 per cent.

Turning to the saleswomen, it appears that in 1925 almost one-half of them, 49.4 per cent, were paid rates less than \$15 a week. This is an increase over 1923, when the proportion was 48.2 per cent, and a marked increase over 1924 when it was 46.4 per cent. Comparing 1925 with 1923, the largest numerical increase in a single group is found among those receiving \$15 and under \$20 a week,

where the numbers rose by 1,423. During this period, however, while the groups earning \$15 and over showed a total increase of 2,150, those earning under \$15 a week increased by 2,701.

For woman clerical workers, the trend seemed more favorable. The report thus sums up the situation:

For women clerical workers, the greatest gain was among those receiving rates of \$25 or more, a gain of 2,302, or 10.6 per cent. In the two-year period 1923-1925, the increase was 5,222, or 27.6 per cent, more than one-fourth. In 1925, 24,176 women in clerical work were reported as receiving a rate of \$25 or more, as against 17,653 wage earners, and 2,966 saleswomen. This group also had the smallest percentage receiving less than \$15, 13.1 per cent, as against 44.3 per cent for the wage earners, and 49.4 per cent for the saleswomen. Moreover, the clerical workers had by far the most regular work, a deviation of 5.1 per cent, as against 10.1 per cent for the wage earners, and 31.2 per cent for the saleswomen. Obviously, special training for clerical work pays, at least so long as the growing demand of large-scale business and modern bookkeeping does not lag behind the increase in supply.

Decree Relating to Employment of Women in Chile¹

IN compliance with a decree of the Chilean Minister of the Interior, women are to be employed in preference to men in any positions in the postal and telegraph services of Chile which they are able to fill. The minister gives the following reasons for such preference: Women in general are more conscientious, painstaking, and accurate, and more amenable to discipline in their work; they have fewer material needs; women should be encouraged to secure economic independence; their admittance to further careers will be an encouragement to cultural development; and the employment of women in positions requiring little physical effort releases men for more virile labor.

¹ Pan American Union Bulletin, Washington, October, 1927, p. 1048.

CHILD LABOR

Employment of Children in Oregon

THE board of inspectors of child labor in the State of Oregon publishes its statistical report in the seventh biennial report of the industrial welfare commission of that State for the years 1925 and 1926 as follows:

	1925	1926
Number of employers of children under 18-----	1,577	1,577
Age and schooling certificates 16 to 18 years of age-----	1,350	1,539
Age and schooling certificates 14 to 16 years of age-----	410	377
Indorsements (change of job)-----	973	866
Special permits (vacation and after school)-----	3,221	2,440
Part-time permits issued to children between 16 and 18 who had not completed the grammar grades-----	460	541
Indorsements (change of job)-----	138	128
Miscellaneous-----	560	1,247
Refusals under age and school grade-----	628	638
Total applications-----	7,740	7,776
Children injured under 18 years of age-----	248	432

Accidents to Working Children of Ohio

THE Consumers' League of Ohio has recently issued a study of accidents to employed minors under 18 occurring in that State in the first nine months of 1926. During that time 2,763 such accidents were reported, of which 1,031 were sufficiently serious to involve the loss of some time from work. Of these 533 caused disability lasting over 7 days, 27 caused permanent disability, and 3 were fatal. The number of days lost through these accidents was 36,942, the average being 13.4 days per accident. Manufacturing industries account for much the largest group of injuries, 1,889, and for the greatest loss of time, 27,415 days.

The lack of data as to the occupational distribution of employed minors makes it difficult to calculate the relative hazard of different industries, but taking the figures of the 1920 census as to where minors are employed, their accident rate per 1,000 employed was, in agriculture, 1.2; in manufacturing and mechanical industries, 49.5; in extraction of minerals, 15.1; in trade, 40.3; and in professional and clerical service, 1.6.

Machinery and handling objects seemed equally responsible for injuries, the first accounting for 618 and the second for 632 cases. Metal-working machinery made the worst showing, accounting for 366, or 59.2 per cent, of the machine accidents. Textile machines came next with 72, and paper and printing machinery followed with

60 accidents. No other kind of machinery was responsible for as many as 40 accidents. The average number of days lost through machine accidents was $23\frac{1}{2}$, but there was much variation in this respect.

Although the metal-working machines show the largest group of machine accidents, the average number of days lost from accidents on machines of the metal industry is $6\frac{1}{2}$ days less than the average for all machines (although this includes 10 permanent disabilities—52.6 per cent of the total). Paper and wood-working machines, on the other hand, although the number of accidents is comparatively few, rank at the top with almost three times the average for number of days lost. Leather, clay, glass, and stone, and even food manufacturing machines, fall well above the average.

The league made a special investigation of compensable injuries to minors. Of 378 cases for which it was possible to gain information about the work certificate required for minors under 18, in 171 (45.2 per cent) no certificate was on file, and in 37 (9.8 per cent) the certificate on file authorized the minor's employment at a different job from that in which he was injured. Other illegalities were found.

Even more serious, of course, than the lack of a certificate is the employment of children at prohibited occupations. Of the 496 cases of injuries lasting over 7 days on which we had data, 37, or 7.4 per cent, were found to have occurred in occupations definitely prohibited by the child labor law.

In 14 of these cases of injury in prohibited occupations, the sufferers were operating emery or polishing or buffing wheels, in 6 cases they were running elevators, in 5 they were operating lifts or hoisting machinery, in 3 they were working during prohibited hours, in 2 they were engaged in track repairing, and the others were scattered through different occupations expressly forbidden as too hazardous for workers under 18.

An effort was made to find out how far the accident had affected the child's industrial life. Of 293 who had been injured, only 80, or 27.3 per cent, were working on the job they held at the time of the accident. Of the 97 who were on different jobs, 41 said they had changed because they wanted different work, 20 had been laid off from their former work, 26 had been incapacitated for it, and for 10 no reason was obtained.

A study of the amounts received under the workmen's compensation law leads to the conclusion that compensation for injuries to minors is inadequate. The law calls for a payment of two-thirds of the wage received at the time of the accident, but owing to the so-called "waiting period," the compensation actually received does not come up to this amount. For 414 cases in which full wage data could be obtained, it was found that the median wage at the time of the accident was \$16 a week.

Let us look closely at what happens to the child receiving the median wage of \$16 who suffers an industrial injury. Suppose he is disabled for three weeks; he receives nothing for the first week; for each of the other two weeks, his compensation is two-thirds of \$16, or \$10.66. The total compensation for the three weeks' disablement is thus \$21.32, or \$7.11 for each week of actual time lost.

A study of the actual compensation per week received by 410 children suffering from temporary disablement, all of whom had been in full-time employment, showed that the median compensation per week was \$6.64. "This is only 41 per cent of the median wage of \$16 instead of $66\frac{2}{3}$ per cent. The difference is of course due to the seven days' waiting period before compensation begins."

Two recommendations are made as to desirable changes in the law regarding compensation for children injured in industrial accidents. The minimum compensation for such children might well be raised.

The figures on compensation actually received by child workers would indicate that a real hardship falls upon the child and his family by reason of the small amount of compensation. This could be remedied in large measure by an increased minimum compensation.

The second recommendation is that when a child is injured while illegally employed, he should be entitled to double or triple compensation. Several States already have such a provision, which is especially effective in discouraging the employment of children in prohibited occupations or under illegal conditions.

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INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in October, 1927

DATA regarding industrial disputes in the United States for October, 1927, with comparable data for preceding months, are presented below. These reports are made possible through the cooperation of the Conciliation Service of the Department of Labor and other agencies.

Under the present method of presentation detailed figures are given not only regarding the number of disputes beginning each month, but also regarding the number in effect at the end of the month and the number of workdays lost by reason of disputes during each month.

Disputes involving fewer than six workers and those lasting less than one day have been omitted. Data for September and October are subject to revision because of the fact that reports for these months are more or less incomplete.

Table 1 is a summary table showing for each of the months—June, July, August, September, and October—the number of disputes which began in these months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question. It is to be noted that the figures given include only those disputes which have been verified by the bureau.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JUNE TO OCTOBER, 1927

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month
	Beginning in month	In effect at end of month	Beginning in month	In effect at end of month	
June, 1927	75	82	18, 585	196, 047	4, 859, 468
July, 1927	62	62	33, 763	199, 087	5, 307, 980
August, 1927	53	50	8, 066	198, 367	4, 998, 596
September, 1927 ¹	46	46	12, 544	197, 268	4, 958, 900
October, 1927 ¹	39	57	11, 223	83, 387	2, 760, 005

¹ Preliminary figures subject to revision.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in August, September, and October, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN AUGUST, SEPTEMBER, AND OCTOBER, BY INDUSTRIES

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	August	Septem- ber ¹	October ¹	August	Septem- ber	October
Automobiles		1	1		12	135
Barbers	1	1		104	30	
Brewery and soft-drink workers			1			
Building trades	11	7	8	987	638	11
Chaufeurs and teamsters	2	3	2	22	8,037	90
Clerks and salesmen			1			366
Clothing	11	6	3	2,569	557	420
Coopers	1			20		190
Farm labor	1			60		
Food workers			2			335
Furniture	3	4	2	169	319	
Glass	1		3	30		117
Leather workers		3	1		345	1,427
Lumber and timber workers	1			21		312
Metal trades	1			25		
Mining	5	1	6	1,265	1,100	6,747
Motion-picture and theatrical workers	2	12	1	608	881	27
Oil and chemical workers	1	1	1	7	48	9
Pottery	1			80		
Rubber		1			140	
Slaughtering and meat packing	1			30		
Stationery engineers and firemen			1			24
Steamboat men			1			175
Stone		1	1		60	100
Street-railway employees			1			50
Textile	9	3	6	2,029	167	523
Miscellaneous	1	2	2	50	210	115
Total	53	46	39	8,066	12,544	11,223

¹ Figures given are preliminary figures.

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in October, classified by number of workers and by industries:

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN OCTOBER, 1927, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in October, involving—				
	3 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers
Automobile, carriage, and wagon workers			1		
Brewery and soft-drink workers	1				
Building trades	2	1			
Chaufeurs and teamsters	1		1		
Clerks and salesmen			1		
Clothing		2	1		
Food workers		1	1		
Furniture	1		1		
Glass			2	1	
Leather			1		
Mining		2	1		3
Motion-picture and theatrical workers		1			
Oil and chemical workers	1				
Stationery engineers and firemen		1			
Steamboat men			1		
Stone			1		
Street-railway employees		1			
Textile		5	1		
Miscellaneous	1		1		
Total	7	14	14	1	3

In Table 4 are shown the number of industrial disputes ending in October, by industries and classified duration:

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN OCTOBER, 1927, BY INDUSTRIES AND CLASSIFIED DURATION

Industry	Classified duration of strikes ending in October, 1927					
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	3 months and less than 4 months	4 months and less than 5 months
Automobile, carriage, and wagon workers	1		1			
Building trades	1		1			
Clerks and salesmen	1					
Clothing	1	1				1
Coopers				1		
Furniture				1		
Glass	3					
Lumber and timber workers				1		
Mining	2	1				
Motion-pictures and theatrical workers			4			
Oil and chemical workers	1					
Printing and publishing					1	
Textile	3	1				
Miscellaneous	1					
Total	14	3	6	3	1	1

Principal Strikes and Lockouts Beginning in October, 1927

GLASS workers.—A strike or suspension of cutters and flatteners employed in window-glass factories in various States throughout the country began October 1, following the termination on September 30 of the wage agreement in effect until that date. Nonunion plants and those using what is known as the Fourcault system were not affected. Three union organizations were involved—the Cutters' League of America in plants using the sheet-drawing system of production, except the Fourcault system; the Window Glass Cutters and Flatteners' Association of America (Inc.) in the independent cylinder-machine plants; and the Window Glass Cutters and Flatteners' Protective Association of America in the factories of the American Window Glass Co.

The strike or strikes involved three employing groups, namely: The American Window Glass Co., employing members of the Window Glass Cutters and Flatteners' Protective Association of America; the Libbey-Owens Sheet Glass Co., employing members of the Window Glass Cutters' League of America; and the independent cylinder-machine manufacturers, employing members of the Window Glass Cutters and Flatteners' Association of America (Inc.).

Unsuccessful conferences between the manufacturers and representatives of the workers preceded the suspension. At a conference held in St. Louis between manufacturers operating cylinder machines and the Window Glass Cutters and Flatteners' Association of America (Inc.), the workers asked for a 15 per cent increase in wages. The manufacturers countered with a proposal for a 40 per cent reduction.

The Libbey-Owens Sheet Glass Co. conferred with a wage committee of the Window Glass Cutters' League of America at Toledo. The first proposition advanced by the men was for an advance to

48 cents a box for cutting single-strength glass and 52 cents a box for cutting double-strength glass, the rates in effect being 42 cents for single and 47 cents for double. The company wanted the men to take a 25 per cent reduction. The men then offered to accept 44 cents for cutting single and 49 cents for cutting double-strength glass. After further consideration the company, it is said, submitted its final proposition, which was that the workers accept a reduction of 12½ per cent, the company guaranteeing to give them a raise of 5 per cent in case the selling price of glass was advanced 10 per cent. This proposition was taken under consideration by the workers' scale committee and conferences were resumed at Toledo on October 4. On October 8 it was reported that the workers employed in the company's plants in Charleston, W. Va., Shreveport, La., and Lancaster, Ohio, had returned to work on that date following the adjustment of their differences with the company on the night of October 7. Settlement was made on the basis of the "same rate as last year with provision for reduction in case of reduction in sales prices." The agreement, it is said, provides for an increase or decrease in wages in accordance with the rise or fall in the selling price of glass, but the downward slide is not to go below 38 cents for single and 42 cents for double-strength glass, while the upward slide is not limited. The number of glass cutters directly involved in the strike against this company in the plants referred to was 377.

Late in September a wage conference was held in Pittsburgh between officials of the American Window Glass Co. and the wage committee of the Window Glass Cutters and Flatteners' Protective Association of America, and an adjournment taken until a later date. Negotiations were reopened on October 5 and terminated successfully on the afternoon of October 6.

The agreement which was finally reached between this company and the union provides for the renewal of the scale which expired September 30, but eliminates for the coming year the 60-day cancellation clause. Under this provision, it is said, either party to the agreement could serve notice of its intention to terminate the then existing scale and call for another conference to consider the question of wages and working conditions at the end of that period. This modification is construed as guaranteeing performance under the contract for one year. At any time after that, according to the agreement, the 60-day clause can be invoked by either party when changed conditions appear to warrant such action. Under this stipulation annual wage conferences will not be necessary hereafter, as the agreement remains in force until the 60-day clause is invoked. The agreement provides for a minimum daily wage of \$5 for cutters and \$6 for flatteners. It also stipulates that for every two points the selling price is raised above that in effect prior to August 28, 1927, the workers are to get one point advance in wages.

When negotiations were resumed on October 5 the company proposed the renewal of the contract including the 60-day clause, but this proposal is reported to have been rejected by 85 per cent of the workers. Then the organization's wage committee proposed the changes accepted by the company. Cutters at the company's plants now receive 37.8 cents for a box of single and 41.3 cents for double-strength glass and the flatteners' rate is in proportion. The number

of glass cutters and flatteners directly involved in this strike against the company in its plants at Jeannette, Pa., and Hartford City, Ind., was about 450.

The strike of 600 cutters and flatteners, members of the Window Glass Cutters and Flatteners' Association of America (Inc.), against "independent manufacturers throughout the country," for a wage increase and better working conditions, ended, it is reported, on October 9, when the men resumed work, or were authorized to do so, "pending further negotiation." The plants against which this strike was directed were located in Arkansas, Kansas, Oklahoma, Pennsylvania, and West Virginia. A settlement was reached on October 14, following the reopening of negotiations at a conference in St. Louis. The agreement runs for one year from October 1 last and provides for a renewal of the old wage scale, which is 37.8 cents a box for single-strength glass and 41.3 cents for double-strength glass, the same as that paid by the American Window Glass Co.

Coal miners, Colorado.—In response to the call of the Industrial Workers of the World (I. W. W.) about 4,000 miners in Colorado struck on October 18 for a "flat scale of \$8.50 a day for all classes of mine workers, a six-hour day and a five-day week." These demands, according to press reports, were posted in the southern territory but no demands were made by the miners in the northern fields. Subsequently, however (October 30) at a "convention" of the I. W. W. at Lafayette, 22 demands on coal operators of the State were drawn up and adopted. Incidentally, provision was made for a so-called State executive board. These demands were as follows:

1. We demand restoration of the Jacksonville wage scale. This scale is demanded for all coal miners of Colorado whether affected by this strike or not.
2. All disputes arising in any one mine to be settled by the mine committee.
3. We demand recognition of mine committees at all coal mines in the State of Colorado and recognition of the State executive board elected by the coal miners of the State and representing all the coal miners of the State.
4. We demand recognition of the checkweighman at all tipples in all the coal mines of Colorado, such checkweighmen to be elected by miners working at the respective mines; checkweighmen to be paid by the miners.
5. We demand strict enforcement of all State mining laws on the part of both employers and employees.
6. We demand strict enforcement of the 8-hour day.
7. We demand that there shall be no discrimination against any employee when he demands enforcement of the State mining laws or complains to the management about working conditions.
8. We demand that no miner be discharged until his case is referred to the mine committee.
9. We demand that there shall be no discrimination on account of age when men are employed.
10. We demand that mine foremen shall not place an inexperienced man with an experienced miner unless with the consent of the latter.
11. All dead work shall be paid for in accordance with the Jacksonville scale.
12. We demand that in all narrow work yardage shall be paid in accordance with the Jacksonville scale.
13. We demand that all material (such as rails, ties, props, spikes, etc., and all material necessary for work and safety) shall be delivered and unloaded by company employees at the face.
14. All shots must be fired by shot firers in accordance with the State mining laws.
15. We demand that all powder must be delivered at the place by the companies in insulated cars, instead of a coal-miner packing.

16. In order to insure the production of clean and marketable coal, it is hereby provided that it is the duty of miners to load the coal as nearly as possible free from all impurities.

17. All wage adjustments, suspensions, or strikes must be settled by the rank and file of Colorado miners through the medium of the State executive board to be elected at the State miners' convention next year.

The State executive board consists of seven men—six members and a chairman. The State executive board has the right to call conventions and conferences of the coal miners of the State of Colorado and participate in all disputes and settlements between miners and operators when they shall occur. All settlements or agreements made by the State executive board must be submitted to referendum of Colorado coal miners either by district or as a whole before ratification. Members of the State executive board can be recalled at any time by a special convention called by the local branches throughout the State. Members of the State executive board must be actual workers employed in the coal mines of the State of Colorado when elected. The State executive board at the present consists of the following: Karl Clemens, chairman; Larkin Sisnroy, William B. Spatlin, K. S. Wartin, Tom Harris, Vinko Mihajlich, Alfred Aparicio.

18. We demand that all contract work outside the Jacksonville agreement be abolished.

19. In work in loading and mining coal there must be not more than two men in two places and always two places for two men.

20. There shall be no discrimination against any employee in the coal mines of the State of Colorado on account of participation in the present strike.

21. We demand that all coal-mining camps in Colorado shall be open for labor organizers to come and go without interference.

22. We demand that the coal-mine operators withdraw all charges they may have made against miners arrested for picketing and that they use their best influence with the county authorities to set them free immediately. If not, we can not return to work until the said prisoners are set free and the charges withdrawn.

K. CLEMENS, *Chairman of Committee.*

The strike leaders claimed that in the northern coal fields of the State the strike was 100 per cent effective. The fields in the southern part of the State were not so seriously affected.

On October 26 the governor issued a statement saying:

An unfortunate condition exists in the coal fields of the State by reason of the I. W. W., an un-American organization, having attempted to bring about a strike, and in this attempt has openly and publicly advocated and practiced defiance and violation of the law.

Picketing and intimidation are unlawful. Every man has a right to quit work if so inclined. Every man has an equal right to work and is entitled to protection in that right.

Our State statutes provide that the local peace officers of counties shall enforce the law, keep and preserve peace. If at any time it shall develop that they are unable to do so, the State stands ready and will give them any and all assistance necessary, and use every instrument within the power of the governor to both enforce the law and protect life and property.

On October 27 the Governor of New Mexico, acting on reports that the strike leaders planned to extend their activities to the adjoining State, dispatched a number of National Guardsmen to Colfax County. He sent a telegram to the sheriff of that county, which declared:

We want no interference from the I. W. W. with New Mexico industries. Am sending National Guard officers immediately, instructing them to investigate and make necessary plans to prevent trouble and for the protection of the miners.

District Attorney Monson has announced that legal action would be taken against miners who went on strike at some of the mines because of their failure to comply with a provision of the industrial law of Colorado which requires a 30-day notice of intention to strike.

On October 29 it was announced that the governor had dispatched three airplanes of the National Guard to the strike zone in the

southern part of the State. These were for observation purposes. A number of arrests were made for picketing. On October 31 it was reported that 24 such arrests had been made in the southern zone. The governor had previously warned the strike leaders that picketing must stop, as it was unlawful.

It was reported from Denver on November 2 that quiet reigned in the strike-affected coal fields of Colorado, as the miners complied with demands of the State that picketing be stopped. Picketing by the strikers was resumed, however, and on November 4 Governor Adams established a State law enforcement department, provision for which had been on the statute but unused for several years. It was hoped that this department would be able to cope with the strike situation and make it unnecessary to mobilize the National Guard. The new organization was headed by Louis N. Scherf, a former Regular Army captain. Captain Scherf recruited 15 ex-service men forthwith and started for Walsenburg in Huerfano County. The State officers will "cooperate with peace officers, enforce the law, maintain order, and exercise our best judgment," said Captain Scherf. This small force was inadequate to handle the situation, and on November 6 the governor sent 20 additional members of the law-enforcement department to augment it.

Extensive arrests of I. W. W. leaders in the southern coal fields, where 25 were jailed at Walsenburg on November 7, following the arrest of a group of 9 on November 6, left the strikers in that zone without leadership, and picketing ceased, at least for the time being, but in the meantime picketing became more active in the northern part of the State. It is stated that all the northern mines but one, the Columbine in Weld County, have been idle since the strike began, and a large strikers' mass meeting was held near the Columbine mine on November 12. The governor has been asked to send additional State officers to the northern strike zone. The cessation of picketing in the south enabled many mines to resume on a basis approaching normal, and on November 12 press reports were to the effect that mines there were operating with working forces between 50 and 75 per cent of normal.

Principal Strikes and Lockouts Continuing into October, 1927

COAL miners.—The strike of April 1 remains about as it was at the time of our last report, as settlements for Ohio and Pennsylvania have not yet been accomplished. Additional companies have secured court protection for the operation of their mines on a non-union basis.

At a meeting in Chicago of the joint wage commission of Illinois operators and miners on October 26, Harry Fishwick, president of the Illinois Miners' Union, was chosen chairman, and Herman Perry, vice president of the Coal Operators' Association of Illinois, was selected secretary of the commission.

An appeal was sent out on October 12 by the officers of District 6 (Ohio), United Mine Workers of America, to the officials and members of the Ohio Coal Operators' Association (Inc.) for a conference to discuss the reopening of the mines of Ohio on practically the same basis as was concluded last week between Illinois operators and miners. The proposal was not accepted.

A preliminary injunction restraining the United Mine Workers from attempting to retain striking miners in houses owned by the Pittsburgh Terminal Coal Corporation was granted in an opinion filed in the Federal Court at Pittsburgh on September 30 by Judge F. P. Schoonmaker. The court held that the defendants were guilty of a conspiracy to interfere with the interstate marketing of coal produced in nonunion mines. The corporation had sought a sweeping injunction against the union, praying that it be restrained from interfering in any way with the operation of the company's nonunion mines and asking for \$1,500,000 damages, basing its suit on provisions of the Sherman and Clayton Acts. The preliminary injunction, however, covered only the eviction phase of the suit, restraining the union from any further attempts to halt evictions of striking miners and their families from company-owned houses, and in addition restrained the National Surety Co. from posting any further bonds in such cases.

The court's second and more comprehensive preliminary injunction of October 11, said to be one of the most sweeping Federal court injunctions in the history of labor disputes, against the United Mine Workers of America, its officials and its members, sustained the Pittsburgh Terminal Coal Corporation in practically all of its contentions, except that nothing was said therein concerning the corporation's prayer for damages of \$1,500,000.

The joint commission established under the agreement of October 1, 1927, between District No. 12, United Mine Workers of America, and the Coal Operators' Association of Illinois, arrived at a temporary agreement October 27, respecting wage rates to loading machine crews in Illinois, which reads as follows, as reported in the Coal Age News:

We, the undersigned commission, appointed by an agreement entered into on October 1, 1927, between District No. 12, United Mine Workers of America, and the Coal Operators' Association of Illinois, have entered into the following agreement as authorized by section 5 of said agreement as a temporary basis for the operation of machinery and devices for loading coal, to be in effect November 1, 1927, to March 31, 1928.

It is understood that this agreement is temporary and is in no way to affect the final agreement to be worked out for the operation of such machinery.

Old local agreements recognized

(1) It is understood that all local agreements that have been recognized governing loading machines and loading devices shall remain in full force and effect until April 1, 1928, and the following provisions are to govern the installation and operation of loading machines and devices at any and all other mines where same are desired where no such local agreements have been adopted.

(2) It is understood that the operators shall have full right to select the men who in their judgment are best qualified to do such work, such selection to be made from men employed in the mine, said men being competent to perform such work.

(3) The rate of pay for men operating loading machines and devices that mechanically handle the coal will be \$10.07 per day, these men to be under direct instructions of the management and to work the full eight hours at whatever work they are instructed to perform, and where a loading machine is broken down the men operating that machine will be given either hand loading or other work for the remainder of the day, providing the mine is in operation.

(4) The rate of pay for shoveling coal onto conveyors shall be \$8.04 per day, it being understood the shovelers shall move and operate their own conveyors when called upon.

(5) The rate of pay for snubbing, drilling, tamping, and shooting the coal either by hand or mechanically and for all other men who work at the face preparing coal for loading, except the undercutting-machine men, shall be \$8.04 per day.

Tonnage rate to undercutters

(6) Men operating undercutting machines when used in connection with the loading devices shall be paid the tonnage rate now in effect at the mine, except where the operator through the operation of his loading machine or device does not furnish sufficient undercutting to keep the mining machine in operation steadily. In such case the men operating the undercutting machine shall be paid at the rate of \$10.07 per day, it being understood that these men are to do any other work in and around the loading machine and its territory that the operator may elect at the same rate of wages, viz, \$10.07 per day.

(7) The operator shall have the right to operate the undercutting machine or have any other work performed in connection with preparing the coal for loading on the night shift so as to enable him to operate his loading machine in as few places as possible, but he shall not have the right to operate the loading machine loading coal except when the mine is in operation, except for some extraordinary purpose such as development work and so on and with an agreement with the miners granting same.

(8) It is understood that the operator shall have the right to the capacity of the loading machines and that there will be no restrictions as to the amount or number of cars loaded by these machines.

(9) If it should appear that the hand loaders at any mine are being unduly discriminated against in the application of this section it is understood that same may be taken up for adjustment under section 13 and section 28 of the State agreement.

(10) Either operators or miners party to this agreement may at any time ask a readjustment of the tonnage rate being paid to undercutting-machine runners in line with the provisions of section 21 of the State agreement.

Conciliation Work of the Department of Labor in October, 1927

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 41 labor disputes during October, 1927. These disputes affected a known total of 35,156 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On November 1, 1927, there were 46 strikes before the department for settlement, and, in addition, 8 controversies which had not reached the strike stage. The total number of cases pending was 54.

MONTHLY LABOR REVIEW

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS CONCILIATION SERVICE, OCTOBER, 1927

Company or industry and location	Nature of controversy	Craft concerned	Cause of dispute	Present status and terms of settlement		Duration	Workers involved
				Beginning	Ending		
Shaughnessy Knitting Mills, Boston, Mass.	Strike-----	Hosiery knitters-----	Discharge of 2 workers-----	Unable to adjust. Places of strikers filled by others.	July 28 Sept. 29	1927 Oct. 15	50 -----
Herbert Manufacturing Co., St. Paul, Minn.	do-----	Garment makers-----	Asked increase and improved conditions.	Employer refused conference.	Sept. 10 Oct. 14	15 1	-----
Federal Leather Goods Co., Union City, N. J.	do-----	Leather workers-----	Asked 15 per cent increase, etc.	Rejected offer of \$2 increase per week.	Oct. 1 Oct. 9	33 8	-----
Independent cylinder manufacturers, Pittsburgh, Pa.	do-----	Glassworkers; cutters; flatteners-----	Asked 11 per cent increase.-----	Adjusted. Returned; agreement for one year at same scale.	do-----	330 2,100	-----
American Window Glass Co., Pittsburgh, Pa.	do-----	do-----	do-----	do-----	do-----	do-----	2,650
Libby-Owens Co., Pittsburgh, Pa.	do-----	do-----	do-----	do-----	Oct. 8 Oct. 8	450 725	-----
Schuylkill Traction Co., Pottsville, Schenandoah, Ashland, Frankville, and Mahanoy City, Pa.	do-----	Traction employees-----	Proposed wage cut-----	Pending-----	Oct. 1 -----	3,800 40 10	-----
Building trades, Indianapolis, Ind.	Threatened strike, Controversy	Iron workers, etc.-----	Nonunion iron workers employed.	Adjusted. Retracted from strike pending conferences.	Sept. 27 Oct. 1	40 300	-----
Cork Insulating Co., Cedar Rapids Iowa.	Strike-----	Carpenters and bricklayers-----	Jurisdiction over cork insulation.	Adjusted. Settled by National Board for Jurisdictional Awards.	Oct. 3 Oct. 6	12 32	-----
Federal Match Co., Bellefonte, Pa.	do-----	Match makers-----	Wage rates; bonus system-----	Unclassified. Accepted new bonus system; no decrease in wages.	Sept. 28 Sept. 30	160 40	-----
Susquehanna Inn, Sunbury, Pa.	do-----	Carpenters-----	Objection to 9-hour day-----	Adjusted. Agreed on 8-hour day on current jobs.	Sept. 27 Sept. 27	9 -----	-----
Strutwell Knitting Co., Minneapolis, Minn.	Lockout-----	Knitters-----	Alleged discrimination for union affiliation.	Unable to adjust. No terms offered.	May 16 Oct. 3	50 325	-----
Doyle Theater, Columbus, Ohio-----	Strike-----	Stage hands-----	Asked that 7 men be employed instead of 5.	Pending-----	June 1 -----	5 10	-----
McNeely Co., Camden, N. J.-----	Threatened strike.	Leather glaziers-----	Discharge of 1 glazier-----	do-----	Oct. 7 -----	15 200	-----
Lehigh & Wilkes-Barre, Ashley, Pa.	Strike-----	Miners-----	Working conditions affecting hours.	Adjusted. Returned; district board to fix terms.	Oct. 6 Oct. 8	1,495 5	-----
Parlor suite frame makers, Philadelphia, Pa.	do-----	Frame makers-----	Wage increase; conditions-----	Pending-----	Oct. 8 -----	150 -----	-----
Brooks Parlor Furniture Co., Minneapolis, Minn.	do-----	Upholsterers-----	Asked union recognition-----	Unable to adjust. Will reemploy men as individuals.	Aug. 24 Oct. 11	131 144	-----
Franko-American Beading Co., Philadelphia, Pa.	do-----	Gum cutters and setters-----	Wage cut-----	Adjusted. Returned; company agreed to restore wages when business improves.	Oct. 5 Oct. 13	7 -----	-----
Feldman Clothing Co., Passaic, N. J.	do-----	Clothing workers-----	Asked 44-hour week-----	Pending-----	Sept. 23 -----	94 10	-----

Boeing Airplane Plant, Seattle, Wash.	Welders do	Welders do	Objection to 12-hour day without overtime rate of organization of building trades.	Oct. 9 do	Sept. 27 do
Mount Carmel Church, White Plains, Westchester County, N. Y.	Building mechanics do	Building mechanics do	Adjusted. Allowed 44-hour week and recognition. Pending.	Sept. 19 do	Oct. 7 do
Standard Clothing Co., Passaic, N. J.	Clothing makers do	Clothing makers do	Alleged violation of wage agreement by cab owners. Nonunion iron workers em- ployed.	Sept. 27 do	Oct. 11 do
Myrtle Clothing Co., Passaic, N. J.	Taxicab drivers do	Taxicab drivers do	Adjusted. Agreed to proceed on this job without change.	Oct. 7 do	Oct. 10 do
Taxicab drivers, Jersey City, N. J.	Lockout Controversy do	Building crafts; iron workers and carpenters. Iron workers and bricklayers. Hod carriers do	Jurisdiction of wheeling brick. Asked recognition and signed agreement. Asked increase of \$3 per week; present rate \$43 per week. Dispute over union charters. Asked 48-hour week.	do do	do do
Leslie Colvin Co., Indianapolis, Ind.	Strike do	Bakery drivers Window washers do	Agreed. Hod carriers given this work. Unclassified. Agreed to accept same wages before commissioner's arrival. Pending.	Oct. 6 do	Nov. 5 do
Fountain Square Theater, Indian- apolis, Ind.	do	Miners Coal miners. Macaroni workers do	Adjusted. Returned without settling charter dispute. Pending.	Oct. 11 do	Oct. 14 do
Fischler Baking Co. (Inc.), New York City	Strike Window washers, New York City do	Miners Coal miners. Macaroni workers do	Oct. 18 do	Oct. 17 do	4,000 \$600
Susquehanna Coal Co., Glen Lyon, Pa.	do	Cloak makers do	Unable to adjust. Unfinished work returned to manufacturer. Unclassified. Wage cut and pay for Labor Day. Asked closed shop.	Oct. 7 do	Nov. 2 do
Coal miners, State-wide, Colorado. Macaroni workers, Brooklyn, Queensboro, and Westchester, N. Y.	do	do	Returned. Pay for La- bor Day not allowed. Unclassified. Going out of business.	Oct. 14 do	Sept. 26 do
Freytag Co., New York City	do	Textile workers do	Adjusted. Allowed 50 cents increase per week now; 50 cents more to be al- lowed later. Pending.	Oct. 19 do	Oct. 25 do
Klipstein Shop, New York City.	do	do	do	Oct. 22 do	20 200
Lipshansky Bros. Shop, New York City	do	do	do	Oct. 12 do	28 28
Zaidenberg Cloak Shop, New York City	do	do	do	Oct. 7 do	35 100
Nanticoke Silk Throwing Co., Nanticoke, Pa.	do	Textile workers do	do	Oct. 17 do	2 2
North Shore Power Co., Waukegan, Ill.	Controversy Theaters, New Bedford, Mass.	Building trades Musicians Textile workers Upholsterers do	do do do do	do do do do	11,005 24,091
	Total				

¹ Men authorized to resume work, pending negotiations; final settlement reached Oct. 14.

² Not reported.

Strikes in New York State, 1925-26 and 1926-27

A RECORD of 99 industrial disputes, involving 117,135 persons and an estimated time loss of 7,529,989 working-days, is disclosed in the annual report of the industrial commissioner of New York State for the year ending June 30, 1927. This is 6 fewer disputes than during the preceding year, but the number of employees directly involved and the working-days lost were, respectively, 43,399 (58.9 per cent increase) and 5,358,108 (246.7 per cent increase) more than in 1925-26. Of the 99 disputes, 38 are recorded as having succeeded and 30 as having been lost. Thirty-three of the strikes were settled by direct negotiations between the parties. The economic loss indicated by the figures given was caused chiefly by the six months' strike in the cloak and suit industry, which involved 36,142 persons and caused a time loss of 5,613,430 days, or 74.5 per cent of the total time loss. The group to which this industry belongs (clothing and millinery, etc.) had 31 strikes, with a time loss of 87.3 per cent of the total. The report states that the building industry was second as to number of strikes and time loss, with 18 strikes and 489,419 days lost (6.5 per cent of total time lost).

As to the cause of these differences between employers and workers, it appears that 44 per cent was due to refusal to recognize the union or to confer with their official representatives. Every one of the 13 groups of industries in which strikes occurred had one or more conflicts due to this cause. Strikes for increases of wages numbered 22 and occurred in 8 groups, as against 48 strikes in the previous year. The following table classifies the strikes by cause.

CAUSE AND RESULT OF STRIKES IN NEW YORK STATE IN 1926 AND 1927

Cause	Number of disputes		Employees involved		Working-days lost		Result of disputes					
	1926	1927	1926	1927	1926	1927	1926		1927		Won by employers	Won by employees
							Won by employers	Won by employees	Compromised or pending	Won by employers	Won by employees	Compromised or pending
Wage increase.....	48	22	22,506	15,328	245,036	408,065	25	8	15	8	4	10
Wage reduction.....	5	7	1,078	7,464	22,259	85,666	2	2	1	3	3	1
Shorter hours.....	1	8	12,000	6,466	1,272,000	119,461			1	2		6
Union recognition.....	28	44	20,129	27,552	340,548	808,282	9	10	9	18	16	10
Particular persons.....	6	6	653	807	6,106	10,728	2	4		2	2	2
Working arrangements.....	16	7	16,970	56,868	281,532	6,001,261	10	2	4	1	2	4
Sympathetic.....	1	5	400	5,273	4,400	96,526	1			1	3	1
Total.....	105	99	73,736	119,758	2,171,881	7,529,989	49	26	30	35	30	34

Queensland Railway Strike

DURING the latter part of August, 1927, a dispute developed on the Queensland railways which for a little time threatened to cause serious and widespread trouble. Few reports of the matter reached this country, and the following account is summarized from the news contained in the Australian Worker, a weekly paper, in its issues for August 31, September 7, and September 14.

The difficulty began with a strike in a sugar mill at South Johnstone which the employers tried to break by putting in nonunion labor. The strikers called upon the railwaymen of the local roads to refuse to transport the sugar thus produced, which the railwaymen agreed to do. The railways in Queensland are State owned and administered by a board of railway commissioners, who interpreted their regulations as forbidding such a discrimination on the part of the men against a particular form of traffic. They accordingly served notice that all refusing to handle the Johnstone sugar would be suspended. By August 27 as many as 80 men had been laid off under this order, and as other railwaymen refused to take the places made vacant, there was practically a strike in force. The railway commissioner announced that the suspended men would be dismissed, and the railway employees extended their boycott to cover all traffic to and from the Johnstone mill. On August 29, the Premier issued an ultimatum to the railway employees, giving them until Saturday, September 3, to make up their minds to obey the orders of the commissioners, with the alternative of a wholesale dismissal of all who refused to do so. The men maintained their attitude, and on the 3d approximately 18,000 men were laid off, causing a complete tie-up of the Queensland railways.

All work on the railways ceased promptly at noon on Saturday. There was no disorder of any kind. The cessation of work was brought about quietly and without any display of hostility on either side. In the Brisbane metropolitan area, the work of taking the people out of the city after the trains had ceased running was carried out by motor vehicles of all kinds. For a time there was some confusion, but by Saturday night the motor-transport services appeared to be working smoothly. In some of the northern centers there were expressions of protest at the Government's high-handed action, but no hostile scenes occurred. The railwaymen were particularly law-abiding and orderly.

The stoppage throughout the State was inconvenient enough, but the real danger was of a spread of the trouble through the action of affiliated unions. The Queensland railway unions were affiliated with the railway unions throughout the Commonwealth, and it was a question whether or not these would come to the support of the strikers by refusing to handle traffic to and from Queensland. If any such action occurred, other unions would inevitably be drawn in, and something very like a universal strike would develop, with consequences no one could foresee. Fortunately, the workers had no more desire than the Government for such an outcome, and despite the action of a few hotheads on both sides the trouble did not spread as feared. As expressed in their meetings and resolutions, the prevailing sentiment of the unions appears to have been disapproval of the Premier's action in dismissing the whole railway force over a dispute involving at the most a few hundred workers—a few dozen, some of the more eager declared—coupled with a determination not to let the labor movement as a whole be dragged into the difficulty.

For a week the railroads were tied up, and then a settlement, variously characterized as a compromise and as a victory for the Government, was reached. The first step was an agreement on the part of the unions to accept the board of trade's offer for a compulsory settlement of the strike in the sugar mill over which the whole trouble had arisen. Then the union leaders agreed that the

railwaymen should return to work, signing a guaranty of loyal service to the railway department, while the Government on its side promised that there should be no victimization and no loss of status or privileges for those who had struck. On this understanding the dispute was officially declared off as from midnight of Saturday, September 10, and by Monday morning all railway services were resumed.

The terms of the settlement signed by both parties were as follows:

It is agreed that all employees shall be reinstated in their former positions in the service without loss of status. It is also agreed that there is to be no victimization of any person by the commissioner for railways or any of the unions concerned. Each employee before beginning work shall sign the following undertaking: "Conditional on my reappointment without loss of status in the service of the railway department of the Government of Queensland, I bind myself to observe and obey the rules and regulations as printed in the existing book of rules and regulations, which regulations were in force during my previous term of employment."

An important result of the difficulty is that it has roused the unions to a realization of the danger involved in allowing hasty and ill-considered discrimination against so-called "black" goods. According to the Australian Worker, the leaders are taking action to prevent trouble in the future from this cause.

Steps are now being taken by the various transport unions to prevent branches of unions in isolated centers from involving other unions in industrial centers in industrial troubles by making "black" declarations. The combined unions' dispute committee held a meeting on Monday morning when it was decided to form a provisional council of transport unions, which will meet as soon as the unions concerned are able to appoint their representatives.

LABOR ORGANIZATIONS AND CONGRESSES

Annual Convention of American Federation of Labor, 1927¹

THE forty-seventh annual convention of the American Federation of Labor met at Los Angeles October 3 to 14, 1927.

At the opening session President William Green referred briefly to some of the important problems before the delegates and called attention to the fact that notwithstanding the charge that the federation is advocating "economic absurdities" its wage policy has been accepted by many representatives of industry who are defending that policy on public platforms.

James J. Davis, United States Secretary of Labor, was among the distinguished speakers. He covered a wide range of subjects, commenting on the "criminal waste of our natural resources" and estimating that there are 300,000 more miners than are needed in our coal industry. He reported an estimated annual wage loss of over \$1,022,000,000 from industrial accidents, declared that jurisdictional disputes do more than anything else to divide employers and employees, and suggested the possibility of "some sort of supplemental organization in which craft autonomy would be merged into industrial grouping, at the same time leaving craft unionism alone in the smaller and older plants where it still fits more or less." He held that the almost universal use of automatic machinery is going to make it possible for men of 70 to handle these machines as well as workers 20 years of age; and that we should never rest until we have devised the ways and means to eliminate the waste of man power resulting from unemployment.

Arthur Pugh, fraternal delegate from the British Trades-Union Congress, told the delegates that "we should get more practical results if we developed our international organizations on industrial lines, as this it seems * * * would more accord with the developments of capitalist economy. Such forms of organization with a coordinating secretariat engaged in practical cooperation with the International Labor Office at Geneva, appear * * * to offer the best means of effective international work." Will Sherwood, also a fraternal delegate from the same congress, stated that he looked to "sane internationalism * * * to make impossible ever again to have war between the nations of the earth." The Canadian fraternal delegate spoke on the recent increase in trade-unionism in the Dominion and reviewed the progress of labor legislation in his country.

John P. Frey, now secretary of the Metal Trades Department, stressed the importance of home markets and insisted that "wages

¹ American Federation of Labor. Report of proceedings of forty-seventh annual convention (advance copy).

must be sufficient to enable us to use and consume the products of industry."

The final decisions reached by the delegates were closely in line with the policies defined in the executive council's report to the convention, an abstract of which was published in the Labor Review, November, 1927 (pp. 116-120).

A résumé of the adopted resolutions and recommendations on various subjects is given below.

The Government Service

THE delegates indorsed the Welch bill for salary increases and declared themselves in favor of eliminating speeding-up practices; a differential for night work; the extension of the Saturday half holiday; the "establishing of a preferential status for American citizens"; a more liberal retirement law; the abolition of the Personnel Classification Board; and the creation of a civil service court of appeals.

Department of Labor

THE president of the Federation was requested by the convention to endeavor to secure more adequate appropriations for the bureaus of the United States Department of Labor, and the attention of the delegates was drawn to the following figures:

Department	Appropriations			
	1927		1928	
	Amount	Per cent	Amount	Per cent
Agriculture.....	\$139,635,823	77.6	\$144,487,820	76.7
Commerce.....	30,632,847	17.1	35,240,430	18.7
Labor.....	9,561,305	5.3	8,558,540	4.5
Total.....	179,829,975	100.0	188,286,790	100.0

It was recommended that the resolution reproduced in part below be referred to the executive council:

That the forty-seventh annual convention of the American Federation of Labor call upon the Congress of the United States of America to provide ways and means and direct the Department of Labor to make full and satisfactory investigation of the following questions:

1. Do abnormally high retail prices adversely affect the working people by unnaturally reducing the demand for necessary products?
2. What effect has faulty distribution on opportunity for employment?
3. Would it be possible to so regulate production and consumption within the United States that it would be unnecessary to export competitive products in such quantity as to adversely affect wage levels in other countries?
4. In what way can displaced labor be quickly reabsorbed into industry where the displacement results from use of machinery which increases the output of the individual?
5. Would it be possible to reduce hours of labor, thereby balancing production and consumption to such an extent that the supply would equal the demand without creation of a surplus which eventually becomes detrimental to both capital and labor?

Seamen and the Merchant Marine

A N American merchant marine and an eight-hour day for sailors on United States merchant vessels were favored, also the abolition of the Sea Service Bureau and the Shipowners' Association shipping offices, and the employment of seamen through the United States Shipping Commissioner; the enactment of S. 1087, for the supervision of the employment of seamen to insure safety at sea; of S. 3574, to prevent the smuggling of immigrants disguised as seamen; and of H. R. 1383, for transferring the enforcement of the navigation laws to the United States Department of Labor.

Union Organization and Discrimination Against Trade-Unions

THE convention indorsed the executive council's suggestions for maintaining the interest of union members;

Urged a study of mass-production industries with a view to the organization of the workers therein;

Expressed appreciation of the International Ladies' Garment Workers' Union for the assistance of certain international unions in saving that organization "from complete destruction by Communist political adventurers";

Expressed appreciation of the services of the Federation's representatives in aiding the fur workers;

Recommended that all national and international unions affiliated with the Federation investigate the activities of their locals with a view to eradicating any communistic developments.

Declared the "yellow dog contract" a serious menace.

Instructed the executive council to make a thorough study of company unions with a view to exposing their real character.

Referred to the executive council for consideration a resolution indorsing S. 5829, for limiting the jurisdiction of courts of equity.

Denounced Federal court decisions which deprive workmen of the right to work.

Favored starting an immediate campaign to prevent the further expenditure of public moneys in industrial establishments which are known to discriminate against American trades-unionists and other citizens and referred to the executive council for investigation the following section of a resolution with a view to the advisability of the action proposed thereby:

Resolved, That the American Federation of Labor declare its purpose to have all contracts calling for the expenditure of public money, be it city, country, State, or the Federal Government, contain a clause stipulating the employment of American citizens to prevent the unjust exploitation and competition of low-priced foreign labor.

Education

IT WAS recommended that the Federation's permanent committee on education make a study of junior kindergarten or nursery schools, that "the work of the continuation schools be strengthened wherever possible," and that special emphasis be given to vocational guidance, health education, and medical inspection.

The delegates favored a "thoroughgoing reconstruction of our educational aims, methods, and curricula so as to bring them in har-

mony with present-day life" in order that the school may "function more effectively in the preparation of boys and girls for social living."

Indorsement was accorded the activities of the Workers' Education Bureau's research department; the Passaic workers' education program; and the plan of the Workers' Education Bureau to hold week-end conferences in different parts of the country for the discussion of industrial problems; and it was decided that all future volumes to be published in the Workers' Book Shelf shall receive careful editorial reading by competent representatives of the Federation.

Recommendation was made that the labor press of America be urged to continue its support of the Federation and to call special attention to the importance of extending workers' education in every community.

Colonial and Foreign Matters

SELF-GOVERNMENT for Porto Rico and independence for the Philippines were favored, also legislation prohibiting laborers from the latter islands migrating to the United States either directly or via the Hawaiian Islands. The attitude of previous conventions for the rigid restriction of immigration was reaffirmed.

The executive council's report on the Mexico-American Labor Immigration Conference was adopted. As a result of that conference an agreement was reached which not only contemplates the proper enforcement of existing laws of the United States but the petitioning of the Mexican Government by the Mexican Federation of Labor "to consider and to enact a restrictive immigration policy which, in substance, shall conform to the immigration law requirements of the United States."

Reaffirming Opposition to Fascism in America

PRESIDENT Green in discussing the resolution on Fascism said:

"The American Federation of Labor is just as much opposed to Fascism and all it represents as it is to communism."

Antimilitary Measures

OPPPOSITION was reiterated to legislation for conscription, and continued support was approved for proposed legislation against military training in educational institutions other than naval or military schools.

Relations With Other Organizations

THE executive council was urged to consider the farmers' problems with a view to cooperation with farmers' organizations, and further cooperation was approved between the special committee of the Federation and a committee of the American Bar Association.

Miscellaneous

IT WAS recommended that the executive council continue its activities to bring into the open the business methods of the bread trust and keep a watchful eye on radio development, radio legislation, and the Muscle Shoals situation in the next Congress. A

proposal for a comprehensive study of old-age pensions was approved. It was agreed that it was advisable to stop expansion in the labor banking field until dependable policies are determined; that the work of education should be continued until the shorter work week has become universal, and that the Federation "be empowered to enlist the fullest moral and financial support of its members in their efforts to rouse the conscience of America against the evil of child slavery."

The delegates voted that organized labor bring pressure to bear to secure the passage of convict labor legislation and a workmen's compensation law for the District of Columbia, and for a modification of the Volstead Act.

Cooperation of progressive people with the Federation's nonpartisan political policy was also urged.

Election of Officers

PRESIDENT William Green, Secretary Frank Morrison, and Treasurer Daniel J. Tobin were unanimously reelected for another term of office, and New Orleans was chosen for the 1928 convention city.

(See page 181 for list of officers elected.)

Name	State	Elected		Elected	
		Delegates sent to convention	Total votes cast	Delegates sent to convention	Total votes cast
William Green	Mass.	271	321	271	321
Frank Morrison	Illino.	671	671	671	671
John L. Lewis	W. Va.	300	300	300	300
James J. McGuire	N. Y.	613	748	613	748
John T. Sweeney	Conn.	601	601	601	601
John J. McCloskey	Conn.	60	60	60	60
John J. Tobin	Conn.	54	54	54	54
John W. McDevitt	Conn.	29	29	29	29
John A. Coughlin	Conn.	1	1	1	1
John J. O'Farrell	Conn.	1	1	1	1

WAGES AND HOURS OF LABOR

International Comparison of Real Wages as of July 1, 1927

THE International Labor Office presents in the International Labor Review for October, 1927 (pp. 555-560), a comparison of real wages in various large cities of the world as of July 1, 1927, in continuation of similar figures compiled periodically by that office.

The more significant points in this comparison are brought out in the table below. The figures given are in the form of index numbers, using London as the base, or 100. In considering the figures presented it is very important to note that the wage data relate only to a few classes of workers (building, engineering, furniture, and printing and publishing) and the price data are limited to certain articles of food and to rent. Thus, the index numbers can be taken only as a very rough indication of the relative levels of real wages of adult male workers in certain occupations and cities. In many instances, however, the figures shown indicate such wide differences between cities that they may be accepted as reflecting real differences in the level of well-being of the workers in different countries.

According to the table, Philadelphia had the highest real wage level of any of the 20 cities included, its index number, based on food only, being 178, or 78 per cent higher than London. Ottawa, Canada, had the next highest figure, with Copenhagen, the highest of the European cities, coming next. At the other extreme, Rome, Italy, had a wage level one-fourth that of Philadelphia, while Lisbon, Portugal, had a level of less than one-fifth that of Philadelphia. However, the International Labor Office points out that the low levels of Rome and Lisbon may be accounted for in part by the differences in the items of food consumption in the southern European countries from those ordinarily consumed in most of the other countries included in the table.

INDEX NUMBERS OF COMPARATIVE REAL WAGES IN VARIOUS CITIES, JULY 1, 1927
[London, July 1, 1927=100]

City	General average index numbers		City	General average index numbers	
	Based on food only	With allowance for rent		Based on food only	With allowance for rent
Philadelphia.....	178	178	Milan.....	52	53
Ottawa.....	156	154	Brussels.....	48	52
Copenhagen.....	106	106	Riga.....	48	51
Dublin.....	102	110	Prague.....	46	49
London.....	100	100	Tallinn.....	46	47
Stockholm ¹	92	90	Rome.....	43	45
Amsterdam.....	87	87	Lodz.....	42	44
Berlin.....	67	62	Vienna.....	41	46
Madrid.....	54	—	Warsaw ²	37	38
Paris.....	53	—	Lisbon.....	31	—

¹The figures are based on wages in the building, furniture-making, and printing industries only. For other cities the metal industry is also included.

²Based on a weighted average wage. For other cities an unweighted average has been used.

Wages Paid in Buenos Aires, Argentina, in 1926

APUBLICATION¹ of the Argentine Ministry of the Interior contains a detailed account of the results of a comprehensive wage survey which was made in the Federal capital in 1926.

The following compiled from this report shows for a selected list of occupations the number of workers and their average daily and monthly wages by industry and occupation for the year 1926. The wage equivalents in United States currency have been computed at the average exchange rates as shown in the reports of the Federal Reserve Board.

NUMBER OF WORKERS AND AVERAGE DAILY AND MONTHLY WAGES IN SPECIFIED OCCUPATIONS IN BUENOS AIRES IN 1926

[Average exchange rate of paper peso in 1926=40.5 cents]

Industry and occupation	Number of workers	Average daily wages		Number of workers	Average monthly wages	
		Pesos	U. S. currency		Pesos	U. S. currency
Bakeries:						
Master bakers				47	216.59	\$87.72
Kneaders				30	215.00	87.08
Bakers				9	191.11	77.40
Bakers, machine				31	176.12	71.33
Bakers' helpers				30	160.00	64.80
Deliverymen				256	176.13	71.33
Delivery assistants, minors				368	30.00	12.15
Building trades:						
Asphalt workers	4	6.52	\$2.64			
Bricklayers, master	27	9.27	3.75	14	339.64	137.55
Bricklayers, front work	28	8.32	3.37			
Bricklayers	137	7.36	2.98			
Carpenters, master	1	9.00	3.65			
Carpenters	2	8.00	3.24			
Draughtsmen				2	400.00	162.00
Electricians	1	8.00	3.24			
Fitters	3	7.20	2.92			
Painters	28	7.24	2.98	13	162.69	65.89
Plasterers	3	7.50	3.04			
Clothing industry:						
Boots and shoes—						
Cutters, leather	9	6.44	2.61			
Cutters, canvas	6	6.00	2.43			
Cutters, canvas, sole	1	6.50	2.63			
Cutters, sole	5	6.10	2.47			
Cutters, sole, assistants	5	2.70	1.09			
Shoemakers	54	0.25	2.53			
Shoemakers' apprentices	16	1.75	.71			
Slipper makers	6	4.20	1.70			
Slipper makers, minors	8	2.92	1.18			
Trimmers	1	6.00	2.43			
Garment making—						
Cutters				2	200.00	81.00
Plaiters				6	73.33	29.70
Pressers	5	3.38	1.37	3	56.67	22.95
Tailors				24	131.00	53.06
Trouser makers				10	53.50	21.67
Vest makers				4	57.50	23.29
Furniture:						
Cabinetmakers	78	8.67	3.51			
Upholsterers	41	9.46	3.83			
Metalurgical:						
Adjusters	27	6.58	2.66			
Adjusters' assistants	3	4.43	1.79			
Adjusters' apprentices	1	3.36	1.36			
Blacksmiths, master				2	295.00	119.48
Blacksmiths	169	6.62	2.68	12	151.75	61.46
Blacksmiths' helpers	21	3.89	1.58			

¹ Argentina. Cronica Informativa del Ministerio del Interior. Buenos Aires, December, 1926, pp. 161-180.

NUMBER OF WORKERS AND AVERAGE DAILY AND MONTHLY WAGES IN SPECIFIED OCCUPATIONS IN BUENOS AIRES IN 1926—Continued

Industry and occupation	Num- ber of work- ers	Average daily wages		Num- ber of work- ers	Average monthly wages	
		Pesos	U. S. cur- rency		Pesos	U. S. cur- rency
Metallurgical—Continued.						
Blacksmiths' apprentices	6	2.80	\$1.13			
Boiler makers	12	7.02	2.84			
Filers	7	7.17	2.90			
Forgers	41	6.92	2.80			
Forgers' helpers	5	4.36	1.77			
Forgers' apprentices	1	4.00	1.62	1	60.00	\$24.30
Laborers, unskilled	11	2.29	.93			
Lathe operators, master	1	8.80	3.56			
Lathe operators	17	7.07	2.86	3	220.00	80.10
Lathe operators' helpers	5	5.61	2.27			
Lathe operators' apprentices	4	4.06	1.64			
Locksmiths	2	6.60	2.67			
Machinists, chief				15	361.33	146.34
Machinists, inspector					4	450.00
Machinists, head	1	9.00	3.65	11	225.00	182.25
Machinists	372	6.71	2.72	53	212.28	85.97
Machinists' helpers	72	4.32	1.75	3	91.67	37.13
Machinists' apprentices	16	2.50	1.01			
Melters, head	1	9.00	3.65	2	296.67	120.15
Melters	58	6.79	2.75	3	153.33	62.10
Melters' helpers	9	4.28	1.73			
Melters' apprentices	10	2.89	1.17			
Molders, machine	2	5.00	2.03			
Plumbers	15	6.47	2.62	1	150.00	60.75
Plumbers' helpers	1	3.20	1.30			
Riveters	1	5.40	2.19	2	105.00	42.53
Solderers	28	7.38	2.99	1	190.00	76.95
Tinsmiths	36	6.13	2.48	1	100.00	40.50
Tinsmiths' apprentices	7	4.11	1.66			
Textile industry:						
Carders	4	5.00	2.03			
Cutters, purse	25	2.98	1.21			
Examiners	3	2.47	1.00			
Sizers	2	5.00	2.03			
Spinners	16	3.40	1.38			
Stretchers	2	4.00	1.62			
Warpers	3	5.17	2.09			
Warpers' apprentices	2	2.50	1.01			
Weavers, master				1	220.00	89.10
Weavers, male	5	6.40	2.59			
Weavers, female	48	4.26	1.73	5	100.00	40.50
Weavers, minors	27	2.61	1.06	2	40.00	16.20
Weavers, purse, female	9	3.02	1.22			
Weavers, purse, minors	9	2.79	1.13			
Winders	5	2.88	1.17			

Earning Possibilities of Unskilled Worker in São Paulo, Brazil

A COMMUNICATION from the American consul, Robert R. Bradford, at Rio de Janeiro, dated September 14, 1927, contains figures published by the State of São Paulo showing the earning possibilities of an unskilled laborer working on a Brazilian coffee plantation.

An adult agricultural worker can cultivate usually from 3,000 to 3,500 coffee trees a year and his wages would vary from 250 to 350 milreis¹ per 1,000 trees, according to locality. The report assumes that the worker's family is composed of four persons, three of whom are gainfully employed. Their combined wages would therefore amount to from 2,250 to 3,675 milreis.

¹ The average exchange of the milreis for the year 1926=14.44 cents.

Work other than coffee cultivation, such as cleaning pastures, repairing roads, planting, or odd work during the harvest season, is paid for at the rate of 4 to 5 milreis per day. A family having three workers could count on from one to two months of such extra work and receive from 120 to 300 milreis for it.

During the coffee harvest season, which lasts for three months, a laborer is able to earn from 200 to 540 milreis, depending upon the yield, or from 600 to 1,620 milreis for the three workers.

Coffee planters furnish their laborers with a dwelling place, a pasture for animals, and also ground for the raising of vegetables. It is estimated that from 540 to 1,522½ milreis can be earned from the sale of garden products by a family having three workers.

The following statement combines the various earning possibilities of the average family for a year:

	Milreis	United States currency
Cultivation of coffee trees.....	2, 250-3, 675	\$324. 90- \$530. 67
Extra work.....	120- 300	17. 33- 43. 32
Coffee harvest.....	600-1, 620	86. 64- 233. 93
Sale of produce.....	540-1, 522. 5	77. 98- 219. 85
Total.....	3, 510-7, 117. 5	506. 85-1, 027. 77

Expenditures for food, clothing, and sundries, exclusive of medicines and medical care, have been estimated at 3,360 milreis, or \$485.18 per year for a family of four persons.

English Wage Levels, 1914 and 1927

THE English Ministry of Labor has recently published figures showing for certain industries the wage rates as of August, 1914, and September, 1927. (Ministry of Labor Gazette, October, 1927, p. 368.) A warning is published with them as to the extent to which they may safely be used.

The information available for the purposes of such a comparison is in nearly all cases limited to (a) the standard or minimum rates of wages fixed by collective agreements signed by the employers' associations and trade unions concerned or embodied in arbitration awards, statutory orders under the trade boards acts, etc., or (b) in some industries in which no such agreements, awards, or orders have been made, to the minimum rates recognized by the trade-unions concerned.
 * * * The particulars given below, therefore, while based on a careful examination of such material as is available to the department, should be considered in the light of these qualifications and should not be regarded as furnishing more than an approximate indication of the relative levels of wage rates at the two dates; and caution should especially be observed in drawing from them conclusions which depend upon small margins of difference between one figure and another.

Wage Rates in the Building Trades

THE building trades are strongly organized, and their wages are largely governed by general agreements, so that the comparison is perhaps more exact for them than for some others. The following table shows the hourly and weekly wage rates for the two dates:

HOURLY AND WEEKLY RATES OF WAGES IN THE BUILDING TRADES, AUGUST 4, 1914, AND SEPTEMBER 30, 1927, AND PER CENT OF INCREASE

[At par shilling=24.33 cents; penny=2.03 cents. Exchange rate about par]

Occupation	Average (unweighted) of recognized rates of wages in large towns						Average per cent of increase over pre-war rates on Sept. 30, 1927	
	Aug. 4, 1914		Sept. 30, 1927					
	Hourly rates	Weekly rates	Hourly rates	Weekly rates	Hourly rates	Weekly rates		
Bricklayers-----	d. 9.9	s. d. 40 7	d. 20.0	s. d. 74 1	102		82	
Masons-----	9.8	39 7	20.1	74 2	105		87	
Carpenters and Joiners-----	9.8	39 11	20.0	73 11	105		85	
Plumbers-----	9.6	39 8	20.0	74 0	108		87	
Plasterers-----	9.7	40 0	20.3	75 1	109		88	
Painters-----	8.8	36 3	19.9	73 4	126		102	
Laborers-----	6.6	27 0	15.1	55 11	130		107	

Weighting these figures by the relative numbers of men employed in the different occupations, the increase in hourly wages was about 119 per cent at the end of September, while the increase in full-time weekly wages, allowing for the reduction in hours which has occurred since 1914, was about 97 per cent. At the beginning of September, 1927, the cost-of-living index was higher by 65 per cent than in July, 1914, so that the wage rates of the later period represent a real advance in purchasing power for the worker.

Wage Rates in Coal Mining

BUILDING is one of the sheltered industries; coal mining emphatically is not, and the figures relating to it tell a different story. The general method of fixing mining wages is by adding a percentage to a basic wage, the percentage varying as wages are changed, but the basic wage remaining unaltered. The percentage addition varies in the different districts. In 1914 it ranged from 6½ per cent in South Wales and Monmouthshire to 57½ per cent in Durham and 75 per cent in Scotland; in 1927 the percentages for these same districts were respectively 28, 89, and 110. These figures, however, it is stated, do not provide a full measure of the difference in the two periods, since there have been variations in the hours, the allowances for low-paid men, and the like. "The average percentage increase in rates of wages resulting from the combined effect of all these changes can not be reliably estimated." The change in the average earnings per shift worked affords a better indication of the real situation, and this is shown in the following table:

AVERAGE EARNINGS PER SHIFT OF COAL MINERS, JUNE, 1914, AND JULY, 1927, AND PER CENT OF INCREASE

[At par, shilling=24.33 cents; penny=2.03 cents. Exchange rate about par]

District	Average earnings per shift		Per cent of increase, June, 1914, to July, 1927
	June, 1914	July, 1927	
Northumberland	s. d.	s. d.	
Durham	6 2½	8 6½	38
Yorkshire	6 2½	9 2½	48
Lancashire and Cheshire	6 10	10 6½	54
North Derbyshire and Nottinghamshire	6 0½	9 5	55
Cannock Chase	6 6½	11 11	82
North Staffordshire	6 1½	9 3½	51
Warwickshire	5 10½	9 0½	54
South Wales and Monmouth	6 2½	11 2½	81
Scotland	6 9	9 9½	45
All districts	6 5½	9 10½	52

It may be observed that in September, 1927, the percentage additions to basis rates were the same as in July, and earnings per shift were, therefore probably about the same as in July, except in North Derbyshire and Nottinghamshire, and in Warwickshire. It is estimated that in the former of these districts the average in September was about 10s. 3d. and in the latter about 10s. 5d., while for all districts the average was about 9s. 8d., an increase over June, 1914, of about 49 per cent.

Measured by their purchasing power, it will be observed, the earnings of the miners, when fully employed, are less than in pre-war days. When the amount of unemployment in the coal fields is taken into account, it is apparent that the miners' position has worsened considerably.

Wage Rates in Engineering and Shipbuilding

THESE trades have suffered heavily from unemployment, and the increases in wage rates have been less than in some industries. The following table shows the weekly time rates for the two dates and the percentage of increase shown in 1927 as compared with 1914:

AVERAGE WEEKLY WAGE RATES IN THE ENGINEERING AND SHIPBUILDING INDUSTRY, AUGUST 4, 1914, AND SEPTEMBER 30, 1927, AND PER CENT OF INCREASE

[At par, shilling=24.33 cents; penny=2.03 cents. Exchange rate about par]

Occupation	Average (unweighted) of recognized weekly time rates in the principal centers		Average per cent of increase over pre-war rates on Sept. 30, 1927
	Aug. 4, 1914	Sept. 30, 1927	
Engineering:			
Fitters and turners	s. d.	s. d.	
Iron molders	38 11	58 1	49
Pattern makers	41 8	61 8	48
Laborers	42 1	62 6	49
Shipbuilding:			
Shipwrights	22 10	41 8	82
Ship joiners			
Laborers	41 4	55 7	35
	40 0	57 9	44
	22 10	38 5	68

Assuming full employment at both periods, it is evident that in September, 1927, shipbuilding laborers were slightly, and engineering laborers noticeably, better off than in 1914, while the position of the skilled workers had grown worse.

Changes in Miscellaneous Industries

THE average recognized weekly wages of wiremen employed by electrical contractors in 12 large towns showed an increase over 1914 of 91 per cent. In the heavy iron and steel trades the increases vary widely, ranging from 20 to over 70 per cent over pre-war rates. In the cotton industry, if allowance is made for a reduction in working hours, "weekly full-time wages would appear to be generally about 61 per cent above the pre-war level, the equivalent increase in hourly wages being about 86 per cent." The railway service showed real increases.

For the principal grades of adult workmen in the traffic sections of the railway service, the rates of wages in operation at the end of September, 1927, showed increases ranging mostly from 26s. to 34s. a week above the pre-war averages for the corresponding grades. Owing to the wide variation in the pre-war rates of wages, the percentage increases varied considerably. For some of the porters on pre-war rates of about 18s. a week the increase was as much as 145 per cent; on the other hand, for certain classes of higher paid men it amounted to only about 100 per cent.

In agriculture it is estimated that the increase in wages for ordinary laborers was about 76 per cent; for hand compositors on book and job work, 107 per cent; for bookbinders and machine rulers, 117 per cent; for cabinet makers, 84 per cent; for upholsterers, 88 per cent; for French polishers, 94 per cent; and for table hands in baking, 114 per cent.

The department sums up the situation in the following words:

Both the amounts and the corresponding percentages of increase over pre-war rates show a wide diversity among different classes of workpeople. In some cases the increases in full-time weekly rates at the end of September, 1927, were equivalent to only about 20 per cent on the pre-war rates. On the other hand, they were equivalent in some cases to over 100 per cent on the pre-war rates. The information at the disposal of the department is insufficient to enable the average percentage increase for all industries and occupations to be calculated exactly, but it is estimated that at the end of September, 1927, weekly full-time rates of wages for those classes of adult workpeople for which information is available averaged between 70 and 75 per cent above the level of August, 1914, as compared with 170 to 180 per cent at the end of December, 1920, when wages generally were at their highest level. As considerable reductions in normal weekly working hours were made in nearly all industries in 1919 and 1920, the percentage increase in hourly rates of wages since 1914 is substantially greater; while it is not practicable on the basis of available information to make any precise calculation, it seems probable that at the end of September, 1927, the average level of hourly rates was between 90 and 100 per cent above that of August, 1914.

* * *

It should be observed that the foregoing particulars relate to recognized minimum or standard rates of wages for full-time working, and not to actual earnings, which in many industries are affected at present by unemployment and short-time working.

Wages in New Zealand, 1926-27

IN HIS annual report covering the year ending March 31, 1927, the Secretary of Labor of New Zealand gives some details concerning the minimum rates of wages established by arbitration awards as compared with those paid to workers not covered by awards which seem to show that the arbitration proceedings have

no tendency to advance wages beyond prevailing standards. The occupations and the rates shown are given as follows:

**WAGE RATES AWARDED, AND RATES GENERALLY PAID IN NEW ZEALAND, 1926-27,
BY INDUSTRY**

[At par shilling = 24.33 cents; penny = 2.03 cents; exchange rate about par]

Industry	Award rates per hour	Rates gener- ally paid per hour		Industry	Award rates per hour	Rates gener- ally paid per hour						
Bricklayers.....	s. d. 2 3½	2	6	-3	0	Bakers.....	s. d. 2 1½	2	1½	2	4½	
Carpenters and joiners.....	2 4	2	4	-2	6	Boiler makers, engineers, motor engineers, molders, sheet-metal workers, and tinsmiths.....	2 3	2	3			
Electrical workers.....	2 3	2	3	-2	6	Bootmakers.....	1 11½	1	11½	-2	2	
Painters.....	2 3	2	3	-2	6	Cabinetmakers.....	2 3	2	3	-2	6	
Plasterers.....	2 3½	2	6	-3	0	Engine drivers.....	2 0½	2	1½	-2	6	
Plumbers.....	2 4½	2	2	-2	6	Tailors.....	2 1½	1	8½	10½	-2	6
Stonemasons.....	2 3	2	1½	-2	6	Waterside workers.....	2 2½	2	4			
	1 9											
	2 1½											
	2 3½											
	2 4½											

The rates quoted as generally paid are those prevailing in the four chief industrial centers of New Zealand.

Wages in Russia, 1926 and 1927¹

ACCORDING to the May, 1927, issue of Statisticheskoe Obozrenie, the organ of the central statistical department of the Union of Soviet Socialist Republics, the average earnings of Russian industrial workers in March, 1927, were as shown in Table 1:

TABLE 1.—AVERAGE INDUSTRIAL EARNINGS IN THE UNION OF SOVIET SOCIALIST REPUBLICS, MARCH, 1927

[Exchange rate of chervonet rouble, March, 1927 = 51.5 cents]

Industry	Average daily earnings		Average monthly earnings	
	Chervonet roubles	U. S. cur- rency	Chervonet roubles	U. S. cur- rency
Coal mining.....	2.45	\$1.26	60.88	\$31.35
Iron and steel.....	2.56	1.32	65.67	33.82
Metal and engineering.....	3.13	1.61	73.39	37.80
Cotton.....	2.21	1.14	58.05	27.32
Wool.....	2.22	1.14	53.62	27.61
Flax.....	1.65	.85	40.58	20.90
Average.....	2.55	1.31	61.77	31.81
Moscow (all industries).....	3.37	1.74	78.84	40.60
Leningrad (all industries).....	3.29	1.69	78.74	40.55
Ural (all industries).....	2.05	1.06	49.40	25.44
Railway workers.....	3.00	1.55	60.30	35.60

The March, 1927, number of Statisticheskoe Obozrenie contains an article on the wages of building workers. In Russia the season

¹ Reprinted from Ministry of Labor Gazette, London, October, 1927, p. 375.

in this industry stretches over the period April to September, and the maximum number of working-days is about 150. The average daily earnings during the six months April-September, 1926, in some of the principal occupations are given as follows:

TABLE 2.—AVERAGE DAILY EARNINGS OF BUILDING WORKERS, APRIL TO SEPTEMBER, 1926.

[Exchange rate of chervonetz rouble April-September, 1926=51.5 cents]

Occupation	Average daily earnings—						Per cent of total man-days spent on job or piece work	
	On job or piece work		On time-work		On job or piece work and time- work combined			
	Chervo- netz roubles	United States currency	Chervo- netz roubles	United States currency	Chervo- netz roubles	United States currency		
Bricklayers.....	3.44	\$1.77	2.35	\$1.21	3.36	\$1.73	93.1	
Carpenters.....	3.26	1.68	2.17	1.12	3.12	1.61	91.6	
Joiners.....	3.72	1.92	1.99	1.02	3.50	1.80	87.0	
Plumbers.....	4.27	2.20	2.76	1.42	3.99	2.05	79.2	
Plasterers.....	3.65	1.88	2.23	1.15	3.58	1.84	94.9	
Painters.....	3.40	1.75	2.33	1.20	3.26	1.68	91.2	
Navvies.....	3.08	1.59	1.97	1.01	2.96	1.52	88.5	
Laborers.....	2.26	1.16	1.39	.72	1.80	.93	46.5	
All occupations ¹	3.25	1.67	1.65	.85	2.89	1.49	76.9	
Moscow.....	3.53	1.82	1.97	1.01	3.31	1.70	85.7	
Leningrad.....	3.40	1.75	1.82	.94	3.11	1.60	79.5	
Ural.....	3.00	1.55	1.43	.74	2.61	1.34	75.5	

¹ Including some classes not separately shown in this table.

These figures are based, as a general rule, on the wages paid in building undertakings employing 50 or more workers.

Minimum Wage for Government Employees in Uruguay¹

ALL salaried employees and workers over 18 years of age employed in the Government service of Uruguay are to receive a minimum salary of 600 pesos² a year, as the result of a bill recently approved by the Senate and Chamber of Representatives. Those paid by the day are to receive a minimum of 2½ pesos.

Apprentices under 16 years of age may not work more than four hours a day, for which they are to be paid 25 pesos a month or 1¼ pesos a day. Apprentices over 16 and under 18 years of age will be paid 33½ pesos a month or 1½ pesos for a workday not to exceed six hours.

Governmental enterprises may not engage apprentices under 15 years of age and not physically fit. The period of apprenticeship may not exceed two years but may be renewed until the apprentice is old enough to be considered a worker. No apprentices may be employed between 8 p. m. and 7 a. m.

¹ El Dia, Montevideo, July 17, 1927; and International Labor Office, Industrial and Labor Information, Geneva, Oct. 17, 1927, p. 77.

² Average exchange rate of peso in 1926=\$1.0147.

TREND OF EMPLOYMENT

Employment In Selected Manufacturing Industries, in October, 1927

EMPLOYMENT in manufacturing industries decreased one-half of 1 per cent in October, 1927, as compared with September, but in the same time there was an increase of 1.2 per cent in pay-roll totals notwithstanding the rather general observance of Columbus Day in a few States.

The level of employment in October, 1927, was 5.3 per cent below the level in October, 1926, and pay-roll totals were 7.5 per cent lower in October, 1927, than in October, 1926.

The Bureau of Labor Statistics' weighted index of employment for October, 1927, is 87.6, as compared with 88 for September, 1927; 87.4 for August, 1927; and 92.5 for October, 1926. The weighted index of pay-roll totals for October, 1927, is 91.2, as compared with 90.1 for September, 1927; 91 for August, 1927; and 98.6 for October, 1926.

The report for October, 1927, is based on returns from 10,862 establishments in 54 of the principal manufacturing industries of the United States. These establishments in October had 3,002,549 employees whose combined earnings in one week were \$79,761,503.

Comparison of Employment and Pay-roll Totals in September and October, 1927

TWENTY-FIVE of the 54 separate industries had more employees in October than in September, and the same industries, with 1 exception (cigars), together with 9 additional industries, reported increased pay-roll totals.

The outstanding increases in employment, all between 3.4 and 5 per cent, were in the women's clothing, confectionery, agricultural implement, chewing tobacco, and paper-box industries.

The outstanding increases in pay-roll totals, ranging from 3.4 to 9.8 per cent, were in the 5 industries mentioned and, in addition, in the following 13 industries: Flour, shirts, hosiery, stoves, furniture, chemicals, pottery, glass, stamped ware, automobiles (3.8 per cent), electric apparatus, pianos, and shipbuilding. Both the cotton and woolen goods industries made small gains in both items.

The most pronounced downward trends in employment and in pay-roll totals in October appeared in the ice cream, millinery, cast-iron pipe, boot and shoe, fertilizer, petroleum refining, cement, brick, and automobile-tire industries. The iron and steel, structural iron, hardware, automobile, steam car, and shipbuilding industries all fell off in employment but at the same time showed increased pay-roll totals.

The food, textile, and paper groups of industries each gained less than 1 per cent in employment in October and the tobacco group gained 2.3 per cent, while there were losses in employment in the remaining 8 groups, ranging from 0.7 per cent in the lumber group to 2.1 per cent in the leather group.

Nine groups show increases in pay-roll totals in October, ranging from 0.4 per cent in the food group to 3.2 per cent in the vehicle group and 3.5 per cent in the group of miscellaneous industries. The iron and steel and chemical groups show decreases in pay-roll totals of less than one-half of 1 per cent, while the leather group, owing to the dull season in the boot and shoe industry, shows a decrease of 6.2 per cent.

The East South Central geographic division reported a small gain in employment in October, but all other divisions show losses of from 0.2 to 1.7 per cent each. Conditions as to pay-roll totals, however, were reversed, the New England States reporting a loss of 1.9 per cent, and there were very slight decreases in the Mountain and West South Central States, but rather large increases appear in all other divisions except in the Middle Atlantic States, which advanced only 0.2 per cent.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING ONE WEEK EACH IN SEPTEMBER AND OCTOBER, 1927

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		September, 1927	October, 1927		September, 1927	October, 1927	
Food and kindred products	1,712	230,078	231,040	(1)	\$5,835,123	\$5,842,456	(1)
Slaughtering and meat packing	196	84,548	83,977	-0.7	2,182,257	2,157,324	-1.1
Confectionery	305	38,604	40,434	+4.7	700,670	724,183	+3.4
Ice cream	214	10,640	9,637	-9.4	352,647	317,820	-9.9
Flour	329	16,004	16,062	+0.4	420,738	444,358	+5.6
Baking	653	69,406	69,956	+0.8	1,861,668	1,874,795	+0.7
Sugar refining, cane	15	10,876	10,974	+0.9	317,143	323,976	+2.2
Textiles and their products	1,881	594,175	597,681	(1)	11,907,581	12,112,483	(1)
Cotton goods	460	225,060	226,211	+0.5	3,652,787	3,705,356	+1.4
Hosiery and knit goods	250	81,366	82,736	+1.7	1,529,608	1,653,066	+8.1
Silk goods	196	55,445	54,970	-0.9	1,171,232	1,180,199	+0.8
Woolen and worsted goods	189	61,913	62,575	+1.1	1,409,872	1,440,345	+2.2
Carpets and rugs	28	23,527	23,480	-0.2	626,343	624,457	-0.3
Dyeing and finishing textiles	100	30,553	31,090	+1.8	760,794	782,688	+2.9
Clothing, men's	282	63,912	63,335	-0.9	1,588,270	1,525,118	-4.0
Shirts and collars	96	19,701	20,226	+2.7	322,110	343,370	+6.6
Clothing, women's	204	21,015	21,882	+4.1	567,264	586,458	+3.4
Millinery and lace goods	76	11,683	11,176	-4.3	279,301	271,456	-2.8
Iron and steel and their products	1,784	639,146	629,434	(1)	18,225,855	18,168,010	(1)
Iron and steel	206	250,934	256,791	-1.2	7,515,339	7,534,122	+0.2
Cast-iron pipe	28	12,284	11,913	-3.0	295,129	278,416	-5.7
Structural ironwork	160	25,028	24,263	-3.1	713,211	720,463	+1.0
Foundry and machine-shop products	966	225,411	220,992	-2.0	6,457,073	6,379,169	-1.2
Hardware	71	32,541	32,265	-0.8	701,174	801,753	+1.3
Machine tools	150	28,300	28,244	-0.2	862,433	860,584	-0.2
Steam fittings and steam and hot-water heating apparatus	113	39,827	38,844	-2.5	1,151,824	1,136,564	-1.3
Stoves	90	15,821	16,122	+1.9	439,672	456,939	+3.9
Lumber and its products	1,165	221,755	220,734	(1)	4,940,150	5,000,967	(1)
Lumber, sawmills	479	126,157	123,986	-1.7	2,592,137	2,583,300	-0.3
Lumber, millwork	263	31,600	31,038	-1.8	770,390	769,179	-0.2
Furniture	423	63,998	65,710	+2.7	1,577,623	1,657,428	+5.1

See footnote at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING ONE WEEK EACH IN SEPTEMBER AND OCTOBER, 1927—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		September, 1927	October, 1927		September, 1927	October, 1927	
Leather and its products.	359	129,713	126,927	(1)	\$3,082,443	\$3,873,134	(1)
Leather	124	27,120	26,973	-0.5	668,836	670,360	+0.2
Boots and shoes	235	102,593	99,954	-2.6	2,413,607	2,202,774	-8.7
Paper and printing	912	177,456	178,061	(1)	5,726,229	5,825,086	(1)
Paper and pulp	216	58,268	58,283	+2	1,500,883	1,545,105	+2.9
Paper boxes	181	20,342	21,044	+3.4	457,318	485,129	+6.1
Printing, book and job	307	50,729	50,203	-1.0	1,787,728	1,778,195	-0.5
Printing, newspapers	208	48,117	49,131	+2.1	1,980,300	2,017,257	+1.9
Chemicals and allied products	357	90,179	88,477	(1)	2,600,400	2,578,753	(1)
Chemicals	123	31,815	32,163	+1.1	857,628	892,445	+4.1
Fertilizers	175	11,262	10,862	-3.6	226,858	203,139	-10.5
Petroleum refining	59	47,102	45,452	-3.5	1,515,914	1,483,169	-2.2
Stone, clay, and glass products	672	113,364	111,565	(1)	2,944,251	2,969,491	(1)
Cement	90	26,796	26,090	-2.6	785,743	773,689	-1.5
Brick, tile, and terra cotta	398	34,019	32,298	-5.1	857,904	821,065	-4.3
Pottery	60	12,827	13,089	+2.0	328,528	349,703	+6.4
Glass	115	39,722	40,088	+0.9	972,076	1,025,034	+5.4
Metal products, other than iron and steel	220	51,449	51,039	(1)	1,331,939	1,351,839	(1)
Stamped and enameled ware	73	19,837	19,985	+0.7	470,420	503,250	+5.0
Brass, bronze, and copper products	147	31,612	31,054	-1.8	852,519	848,639	-0.5
Tobacco products	186	46,576	47,632	(1)	\$20,999	\$21,301	(1)
Chewing and smoking tobacco and snuff	27	7,630	7,996	+4.8	116,172	127,511	+9.8
Cigars and cigarettes	153	38,946	39,636	+1.8	704,827	703,790	-0.1
Vehicles for land transportation	1,213	472,215	467,792	(1)	14,390,333	14,864,025	(1)
Automobiles	203	304,781	301,798	-1.0	9,532,961	9,898,528	+3.8
Carriages and wagons	60	1,504	1,536	+2.1	33,752	33,871	+0.4
Car building and repairing, electric-railroad	304	26,956	26,714	-0.9	815,051	813,547	-0.3
Car building and repairing, steam-railroad	556	138,914	137,744	-0.8	4,007,669	4,118,079	+2.8
Miscellaneous Industries	407	251,029	251,567	(1)	7,085,008	7,334,368	(1)
Agricultural implements	91	23,528	24,549	+4.3	630,325	693,972	+8.5
Electrical machinery, apparatus, and supplies	176	122,316	123,804	+1.2	3,300,705	3,607,772	+6.4
Pianos and organs	39	7,650	7,849	+2.6	237,275	246,910	+4.1
Rubber boots and shoes	10	18,166	18,714	+3.0	458,862	471,611	+2.8
Automobile tires	52	52,902	50,618	-4.3	1,620,076	1,540,857	-4.9
Shipbuilding, steel	39	26,458	26,033	-1.6	738,765	773,246	+4.7
All industries	10,862	3,017,126	3,002,549	(1)	78,890,311	79,761,503	(1)

Recapitulation by Geographic Divisions

GEOGRAPHIC DIVISION							
New England	1,387	404,290	402,849	-0.4	\$9,980,512	\$9,791,222	-1.9
Middle Atlantic	2,545	843,425	841,739	-0.2	23,633,758	23,669,342	+0.2
East North Central	2,893	974,168	966,324	-0.8	27,909,984	28,706,944	+2.9
West North Central	1,043	161,664	160,532	-0.7	4,013,762	4,064,258	+1.3
South Atlantic	1,145	282,172	281,447	-0.3	5,221,170	5,282,560	+1.2
East South Central	514	112,673	113,395	+0.6	2,135,759	2,172,808	+1.7
West South Central	460	88,295	86,801	-1.7	1,863,068	1,861,443	-0.1
Mountain	183	27,473	27,032	-1.6	743,904	742,868	-0.1
Pacific	686	122,966	122,430	-0.4	3,388,394	3,470,058	+2.4
All divisions	10,862	3,017,126	3,002,549	(1)	78,890,311	79,761,503	(1)

¹ The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

² Less than one-tenth of 1 per cent.

TABLE 2.—PER CENTS OF CHANGE, SEPTEMBER TO OCTOBER, 1927—12 GROUPS OF INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees or wages paid, in the industries]

Group	Per cent of change, September, 1927, to October, 1927		Group	Per cent of change, September, 1927, to October, 1927	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	+0.5	+0.4	Metal products, other than iron and steel	-1.1	+0.8
Textiles and their products	+0.8	+1.8	Tobacco products	+2.3	+1.0
Iron and steel and their products	-1.7	-0.4	Vehicles for land transportation	-1.0	+3.2
Lumber and its products	-0.7	+0.9	Miscellaneous industries	-0.7	+3.5
Leather and its products	-2.1	-6.2	All Industries	-0.5	+1.2
Paper and printing	+0.8	+1.8			
Chemicals and allied products	-1.3	-0.2			
Stone, clay, and glass products	-1.7	+1.2			

Comparison of Employment and Pay-roll Totals in October, 1927, and October, 1926

EMPLOYMENT in manufacturing industries in October, 1927, was 5.3 per cent less than in October, 1926, and pay-roll totals were 7.5 per cent lower in October, 1927, than in October, 1926.

Two of the 12 groups of industries—textiles and tobacco—show increased employment at the end of this 12-month period, but the textile group alone shows an increased pay-roll total. The textile group increases were 1.4 and 2.4 per cent, respectively, in the two items, and the tobacco group increase in employment was 2.9 per cent.

The decreases in 7 of the remaining 10 groups were all of considerable size in both items. The iron and steel group had fallen off 10.4 per cent in employment and 15.1 per cent in pay-roll totals; the vehicle group, 9.1 and 10.6 per cent; the stone, clay, and glass group, 8.8 and 9.5 per cent; the lumber group, 7.7 and 7.4 per cent; the chemical group, 7.6 and 6 per cent; the metal, other than iron and steel, group, 8.4 and 11.5 per cent; and the group of miscellaneous industries, 6.9 per cent in employment and 8.4 per cent in pay-roll total. The decreases in the food and paper groups were moderate in both items, while those in the leather group were 4.4 per cent in employment and 8.8 in pay-roll total.

The pronounced increases in separate industries over this 12-month period were in cotton goods, women's clothing, rubber boots and shoes, and sugar refining, while the most noticeable decreases were those in each of the 8 industries comprising the iron and steel group; in sawmills and millwork; in petroleum refining and fertilizers; in brick, pottery, and glass; in stamped ware; in automobiles, carriages, and steam cars; and in pianos and automobile tires.

The South Atlantic geographic division shows no change in employment between October, 1927, and October, 1926, but 7 of the remaining 8 divisions show decreased employment ranging from 4.1 to 7.2 per cent. The Pacific division decrease was 1.7 per cent only.

Each division shows decided decreases in pay-roll totals at the end of this 12-month period, the range being from 1.6 per cent in the South Atlantic division to 9.7 per cent in the Middle Atlantic division.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS, OCTOBER, 1927,
WITH OCTOBER, 1926

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change, October, 1926, to October, 1927		Industry	Per cent of change, October, 1926, to October, 1927	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	-1.8	-1.6	Chemicals and allied products	-7.6	-6.0
Slaughtering and meat packing	-3.6	-3.5	Chemicals	-0.6	+0.9
Confectionery	-5.3	-6.9	Fertilizers	-12.5	-9.6
Ice cream	-7.2	-8.9	Petroleum refining	-14.4	-13.1
Flour	-1.9	-0.7			
Baking	+1.3	+1.9	Stone, clay, and glass products	-8.8	-9.5
Sugar refining, cane	+8.6	+3.8	Cement	-5.6	-6.6
Textiles and their products	+1.4	+2.4	Brick, tile, and terra cotta	-10.0	-12.1
Cotton goods	+5.4	+0.2	Pottery	-8.2	-8.9
Hosiery and knit goods	+0.1	+2.9	Glass	-8.5	-8.6
Silk goods	-3.1	-5.0			
Woolen and worsted goods	-5.7	-7.8	Metal products, other than iron and steel	-8.4	-11.5
Carpets and rugs	-0.4	-2.2	Stamped and enameled ware	-11.2	-10.5
Dyeing and finishing textiles	+2.6	+3.4	Brass, bronze, and copper products	-7.3	-11.8
Clothing, men's	-1.2	-2.0			
Shirts and collars	-1.9	+0.8	Tobacco products	+2.9	-6.6
Clothing, women's	+6.6	+7.8	Chewing and smoking tobacco and snuff	+1.1	+0.6
Millinery and lace goods	+0.6	+5.5	Cigars and cigarettes	+3.1	-0.9
Iron and steel and their products	-10.4	-15.1			
Iron and steel	-10.7	-17.2	Vehicles for land transportation	-2.1	-10.6
Cast-iron pipe	-16.8	-18.8	Automobiles	-8.4	-11.6
Structural ironwork	-9.7	-9.5	Carriages and wagons	-10.0	-13.0
Foundry and machine-shop products	-10.4	-14.3	Car building and repairing, electric-railroad	+2.0	+2.6
Hardware	-7.5	-11.7	Car building and repairing, steam-railroad	-10.1	-10.5
Machine tools	-11.4	-13.2			
Steam fittings and steam and hot-water heating apparatus	-5.3	-7.5	Miscellaneous industries	-6.0	-8.4
Stoves	-10.6	-14.8	Agricultural implements	-5.9	-4.8
Lumber and its products	-7.7	-7.4	Electrical machinery, apparatus, and supplies	-7.4	-7.3
Lumber, sawmills	-8.1	-7.7	Pianos and organs	-9.6	-13.6
Lumber, millwork	-11.3	-11.8	Rubber boots and shoes	+0.3	+13.9
Furniture	-4.4	-3.5	Automobile tires	-9.4	-10.7
Leather and its products	-4.4	-8.8	Shipbuilding, steel	-6.8	-9.3
Leather	-3.6	-7.3			
Boots and shoes	-4.7	-9.4	All industries	-5.3	-7.5
Paper and printing	-1.1	-0.4			
Paper and pulp	-3.0	-4.8			
Paper boxes	-2.6	-0.5			
Printing, book and job	-2.0	-0.3			
Printing, newspapers	+1.8	+2.9			

Recapitulation by Geographic Divisions

GEOGRAPHIC DIVISION			GEOGRAPHIC DIVISION—contd.		
New England	-5.4	-6.3	West South Central	-7.2	-4.5
Middle Atlantic	-7.1	-9.7	Mountain	-6.0	-5.2
East North Central	-6.3	-8.8	Pacific	-1.7	-1.9
West North Central	-4.1	-5.9			
South Atlantic	(1)	-1.6	All divisions	-5.3	-7.5
East South Central	-4.4	-5.7			

¹ No change.

Per Capita Earnings

PER CAPITA earnings in October, 1927, for the 54 industries combined were 1.7 per cent greater than in September, 1927, and 2.3 per cent lower than in October, 1926.

Per capita earnings in October, 1927, showed a gain over September, 1927, in 39 industries and no change in 1 other industry. The increases were greatest in shipbuilding (6.4 per cent), hosiery, flour, electric apparatus, and automobiles (4.9 per cent). The outstanding decreases were in fertilizers (7.2 per cent), boots and shoes, and men's clothing (3.1 per cent).

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS OCTOBER, 1927, WITH SEPTEMBER, 1927, AND OCTOBER, 1926

Industry	Per cent of change October, 1927, compared with—		Industry	Per cent of change October, 1927, compared with—	
	September, 1927	October, 1926		September, 1927	October, 1926
Shipbuilding, steel.....	+6.4	-2.8	Steam fittings and steam and hot-water heating apparatus.....	+1.2	-2.4
Hosiery and knit goods.....	+6.3	+2.8	Sugar refining, cane.....	+1.2	-4.3
Flour.....	+5.2	+1.4	Cement.....	+1.1	-1.1
Electrical machinery, apparatus, and supplies.....	+5.1	(1)	Dyeing and finishing textiles.....	+1.1	+0.6
Automobiles.....	+4.9	-3.8	Woolen and worsted goods.....	+1.1	-2.1
Chewing and smoking tobacco and snuff.....	+4.7	-0.7	Cotton goods.....	+0.9	+3.7
Glass.....	+4.5	-0.3	Brick, tile, and terra cotta.....	+0.8	-2.2
Pottery.....	+4.3	-0.7	Foundry and machine-shop products.....	+0.8	-4.4
Stamped and enameled ware.....	+4.2	+0.6	Leather.....	+0.8	-4.0
Structural ironwork.....	+4.2	+0.4	Car building and repairing, electric-railroad.....	+0.6	+0.6
Agricultural implements.....	+4.0	+0.8	Printing, book and job.....	+0.5	+1.8
Shirts and collars.....	+3.9	+2.9	Machine tools.....	(1)	-2.0
Car building and repairing, steam-railroad.....	+3.6	-0.5	Baking.....	-0.1	+0.7
Chemicals.....	+2.9	+1.5	Carpets and rugs.....	-0.1	-1.6
Paper and pulp.....	+2.9	-1.9	Printing, newspapers.....	-0.2	+1.0
Paper boxes.....	+2.5	+2.1	Rubber boots and shoes.....	-0.2	+4.2
Furniture.....	+2.3	-1.0	Ice cream.....	-0.5	-1.9
Carriages and wagons.....	+2.2	+7.2	Slaughtering and meat packing.....	-0.5	+0.1
Hardware.....	+2.2	-4.4	Automobile tires.....	-0.6	-1.4
Stoves.....	+2.0	-4.8	Clothing, women's.....	-0.7	+0.9
Silk goods.....	+1.7	-2.0	Confectionery.....	-1.3	-1.7
Lumber, millwork.....	+1.6	-0.5	Cigars and cigarettes.....	-1.9	-3.7
Millinery and lace goods.....	+1.6	+4.6	Cast-iron pipe.....	-2.7	-2.2
Iron and steel.....	+1.5	-7.1	Clothing, men's.....	-3.1	-0.6
Lumber, sawmills.....	+1.4	+0.3	Boots and shoes.....	-6.3	-5.0
Petroleum refining.....	+1.4	+1.3	Fertilizers.....	-7.2	+3.3
Pianos and organs.....	+1.4	-4.3			
Brass, bronze, and copper products.....	+1.3	-5.4			

¹ No change.

Wage Changes

THIRTY-ONE establishments in 18 industries reported increases in wage rates during the month ended October 15, 1927. These increases averaged 6.2 per cent and affected 1,014 employees, or 27 per cent of the total employees in the establishments concerned.

Five establishments in five different industries reported wage-rate decreases during the same period. The decreases averaged 10.1 per cent and affected 7,565 employees, or 95 per cent of all employees in the establishments concerned. One of these five decreases is not noted in the table below as it was the only one reported in one of

the smaller industries and it might have identified the reporting establishment.

TABLE 5.—WAGE ADJUSTMENTS OCCURRING BETWEEN SEPTEMBER 15 AND OCTOBER 15, 1927

Industry	Establishments		Per cent of increase or decrease in wage rates		Employees affected				
			Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
								In establishments reporting increase or decrease in wage rates	In all establishments reporting
Increases									
Slaughtering and meat packing	196	1	10.0	10.0	34	100	(1)		
Confectionery	305	2	4.6-10.0	7.2	21	7	(1)		
Flour	329	1	4.0-11.0	4.6	283	71	(1)	2	
Cotton goods	460	1	13.6	13.6	27	6	(1)		
Structural ironwork	160	1	5.0	5.0	20	27	(1)		
Foundry and machine-shop products	966	2	6.3-10.0	7.6	44	64	(1)		
Steam fittings and steam and hot-water heating apparatus	113	1	10.0	10.0	5	15	(1)		
Stoves	90	1	5.7	5.7	9	14	(1)		
Lumber, sawmills	479	1	9.5	9.5	21	10	(1)		
Furniture	423	2	5.0-11.0	9.7	18	7	(1)		
Leather	124	1	6.5	6.5	83	29	(1)		
Paper and pulp	216	1	7.0	7.0	47	100	(1)		
Printing, book and job	307	3	1.0-20.0	5.0	32	10	(1)		
Printing, newspapers	208	3	1.0-7.0	3.6	48	12	(1)		
Chemicals	123	2	5.0-10.0	8.6	122	6	(1)		
Brick, tile, and terra cotta	398	1	10.0	10.0	10	12	(1)		
Glass	115	1	1.0	1.0	80	33	(1)		
Automobiles	208	3	5.0-10.0	8.1	80	7	(1)		
Electrical machinery, apparatus, and supplies	176	2	5.0-9.0	5.7	18	5	(1)		
Automobile tires	52	1	5.0	5.0	12	5	(1)		
Decreases									
Confectionery	305	1	11.0	11.0	25	27	(1)		
Foundry and machine-shop products	966	1	5.0	5.0	10	63	(1)		
Furniture	423	1	15.0	15.0	155	88	(1)		
Glass	115	1	7.5	7.5	75	38	(1)		

¹ Less than one-half of 1 per cent.

Indexes of Employment and Pay-roll Totals in Manufacturing Industries

INDEX numbers for October, 1927, and for August and September, 1927, and October, 1926, showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 industries surveyed by the Bureau of Labor Statistics, together with general indexes for the combined 12 groups of industries, appear in Table 6.

The general index of employment for October, 1927, is 87.6, this number being 0.5 per cent lower than the index for September, 1927, 0.2 per cent higher than the index for August, 1927, and 5.3 per cent lower than the index for October, 1926. The general index of pay-roll totals for October, 1927, is 91.2, this number being 1.2 per cent higher than the index for September, 1927, 0.2 per cent higher than

the index for August, 1927, and 7.5 per cent lower than the index for October, 1926.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—OCTOBER, 1926, AND AUGUST, SEPTEMBER, AND OCTOBER, 1927

[Monthly average, 1923=100]

Industry	Employment				Pay-roll totals			
	1926		1927		1926		1927	
	Octo- ber	August	Septem- ber	Octo- ber	Octo- ber	August	Septem- ber	Octo- ber
General index	92.5	87.4	88.0	87.6	98.6	91.0	90.1	91.2
Food and kindred products	94.3	89.1	92.1	92.6	97.9	93.7	95.9	96.3
Slaughtering and meat packing	82.6	80.2	80.1	79.6	85.9	83.7	83.8	82.9
Confectionery	103.0	77.9	93.1	97.5	112.2	85.6	101.1	104.5
Ice cream	93.4	104.2	95.7	86.7	103.2	111.9	104.4	94.0
Flour	93.0	88.6	90.9	91.2	98.4	90.5	92.5	97.7
Baking	104.2	102.1	104.7	105.6	108.7	107.4	110.1	110.8
Sugar refining, cane	88.3	98.7	95.1	95.9	93.7	100.2	95.2	97.3
Textiles and their products	86.4	85.3	86.9	87.6	88.1	86.5	88.6	86.2
Cotton goods	83.4	86.6	87.5	87.9	81.8	86.8	88.1	89.3
Hosiery and knit goods	98.0	92.6	96.5	98.1	113.7	104.7	108.3	117.0
Silk goods	100.3	97.7	98.1	97.2	110.8	104.7	104.5	105.3
Woolen and worsted goods	84.6	78.1	78.9	79.8	87.2	77.6	78.6	80.4
Carpets and rugs	94.4	94.3	94.2	94.6	92.5	93.2	90.8	90.5
Dyeing and finishing textiles	97.6	96.5	98.3	100.1	102.8	98.6	103.3	106.3
Clothing, men's	84.1	84.8	83.9	83.1	76.9	81.0	78.6	75.4
Shirts and collars	82.8	76.5	79.0	81.2	85.1	78.9	80.4	85.8
Clothing, women's	78.9	76.8	80.8	84.1	83.8	79.3	87.3	90.3
Millinery and lace goods	66.6	66.8	70.0	67.0	69.3	69.8	75.2	73.1
Iron and steel and their products	92.2	84.4	84.0	82.6	90.4	87.1	84.7	84.4
Iron and steel	98.1	89.3	88.7	87.6	106.6	90.5	88.2	88.3
Cast-iron pipe	106.7	95.6	91.5	88.8	107.4	97.4	92.5	87.2
Structural ironwork	103.1	97.1	96.0	93.1	112.4	108.0	100.7	101.7
Foundry and machine-shop products	86.4	80.8	79.0	77.4	90.5	82.2	78.5	77.6
Hardware	86.2	76.8	80.3	79.7	98.2	83.1	85.5	86.7
Machine tools	103.7	82.6	92.1	91.9	116.3	91.2	101.3	101.0
Steam fittings and steam and hot-water heating apparatus	95.8	91.5	93.0	90.7	103.1	97.6	96.7	95.4
Stoves	91.8	76.9	80.6	82.1	98.7	78.5	80.9	84.1
Lumber and its products	91.5	84.5	85.1	84.5	102.0	93.5	93.7	94.5
Lumber, sawmills	86.8	80.9	81.2	79.8	97.5	88.7	90.3	90.0
Lumber, millwork	97.1	89.4	87.7	80.1	105.5	97.8	93.3	93.1
Furniture	104.3	94.1	97.1	99.7	115.1	102.3	105.7	111.1
Leather and its products	93.5	91.0	91.3	89.4	93.6	93.3	91.0	85.4
Leather	92.1	88.6	89.2	88.8	96.0	90.4	88.8	89.0
Boots and shoes	94.0	91.8	92.0	89.6	92.6	94.4	91.9	83.9
Paper and printing	105.4	102.4	103.4	104.2	114.2	110.6	111.7	113.7
Paper and pulp	96.2	93.2	93.3	93.3	104.5	98.0	96.7	99.5
Paper boxes	105.6	96.3	99.6	102.9	118.2	107.2	110.8	117.6
Printing, book and job	105.0	102.9	104.0	102.9	114.7	113.9	114.9	114.3
Printing, newspapers	114.3	113.5	114.0	116.4	121.8	120.2	122.9	125.3
Chemicals and allied products	100.3	98.0	93.5	92.6	104.6	96.4	98.5	98.3
Chemicals	96.9	93.3	95.3	96.3	107.9	104.2	104.6	108.9
Fertilizers	104.9	71.7	95.2	91.8	109.5	83.8	110.7	99.0
Petroleum refining	102.7	93.5	91.1	87.9	99.7	91.5	88.5	86.6
Stone, clay, and glass products	102.4	94.8	95.0	93.4	111.2	100.7	99.4	100.6
Cement	95.3	93.2	92.4	90.0	102.9	99.1	97.5	96.1
Brick, tile, and terra cotta	103.1	100.9	97.8	92.8	109.5	105.6	100.6	96.3
Pottery	107.4	94.8	96.7	98.6	121.9	103.2	104.4	111.1
Glass	102.0	89.4	92.5	93.3	112.2	96.2	97.3	102.5
Metal products, other than iron and steel	96.0	50.0	88.9	87.9	98.0	88.3	86.0	96.7
Stamped and enameled ware	93.9	82.5	82.9	83.4	92.4	82.1	78.8	82.7
Brass, bronze, and copper products	97.0	93.4	91.6	89.9	100.0	90.6	88.7	88.2

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—OCTOBER, 1926, AND AUGUST, SEPTEMBER, AND OCTOBER, 1927—Continued

Industry	Employment				Pay-roll totals			
	1926		1927		1926		1927	
	Octo- ber	August	Sep- tember	Octo- ber	Octo- ber	August	Sep- tember	Octo- ber
Tobacco products	87.3	78.5	87.8	89.8	92.9	88.8	91.4	92.3
Chewing and smoking tobacco and snuff	94.7	91.1	91.3	95.7	101.6	95.3	93.1	102.2
Cigars and cigarettes	86.3	76.9	87.4	89.0	91.9	79.1	91.2	91.1
Vehicles for land transportation	89.0	88.0	81.7	80.9	94.2	85.8	81.6	84.2
Automobiles	103.9	99.1	96.2	95.2	111.0	100.1	94.5	98.1
Carriages and wagons	92.3	72.5	76.2	74.8	93.7	78.8	81.2	81.5
Car building and repairing, electric-railroad	88.2	90.8	90.8	90.0	88.9	92.3	91.5	91.2
Car building and repairing, steam-railroad	79.4	72.6	72.0	71.4	83.7	76.5	72.8	74.9
Miscellaneous industries	97.5	92.0	91.4	90.8	105.3	96.8	93.2	96.5
Agricultural implements	93.1	86.6	84.0	87.6	103.4	99.0	90.7	98.4
Electrical machinery, apparatus, and supplies	102.7	92.4	93.9	95.1	108.3	97.7	94.3	100.4
Pianos and organs	97.1	83.8	85.5	87.8	115.7	89.2	96.0	100.0
Rubber boots and shoes	84.2	80.7	89.4	92.0	92.3	91.3	102.3	105.1
Automobile tires	112.7	110.4	106.7	102.1	116.8	114.0	109.7	104.3
Shipbuilding, steel	91.1	89.3	86.3	84.9	101.0	91.4	87.5	91.6

Table 7 shows the general index of employment in manufacturing industries and the general index of pay-roll totals from January, 1923, to October, 1927.

Following Table 7 is a graph made from index numbers, showing clearly the course of employment for each month of 1926 and for each completed month of 1927. This chart makes possible a comparison between corresponding months of the two years, and represents the 54 separate industries combined, showing the course of pay-roll totals as well as the course of employment.

TABLE 7.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO OCTOBER, 1927

[Monthly average, 1923=100]

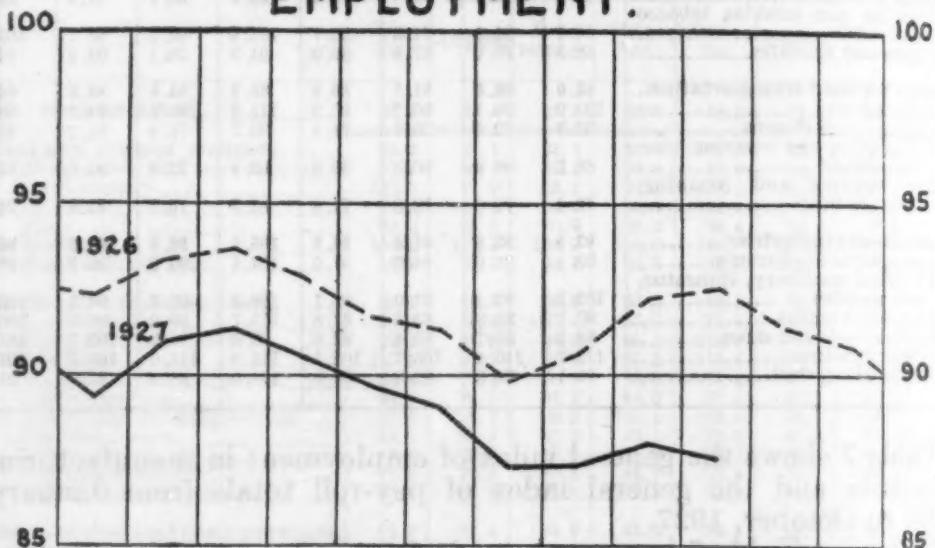
Month	Employment					Pay-roll totals				
	1923	1924	1925	1926	1927	1923	1924	1925	1926	1927
January	98.0	95.4	90.0	92.3	89.4	91.8	94.5	90.0	93.9	90.9
February	99.6	96.6	91.6	93.3	91.0	95.2	99.4	95.1	97.9	96.4
March	101.8	96.4	92.3	93.7	91.4	100.3	99.0	96.6	99.1	97.7
April	101.8	94.5	92.1	92.8	90.6	101.3	96.9	94.2	97.2	95.6
May	101.8	90.8	90.9	91.7	89.7	104.8	92.4	94.4	95.6	95.6
June	101.9	87.9	90.1	91.3	89.1	104.7	87.0	91.7	95.5	93.3
July	100.4	84.8	89.3	89.8	87.3	99.9	80.8	89.6	91.2	89.1
August	99.7	85.0	89.9	90.7	87.4	99.3	83.5	91.4	94.6	91.0
September	99.8	86.7	90.9	92.2	88.0	100.0	86.0	90.4	95.1	90.1
October	99.3	87.9	92.3	92.5	87.6	102.3	88.5	96.2	98.6	91.2
November	98.7	87.8	92.5	91.4	-----	101.0	87.6	96.2	95.4	-----
December	96.9	89.4	92.6	90.9	-----	98.9	91.7	97.3	95.6	-----
Average	100.0	90.3	91.2	91.9	¹ 89.2	100.0	90.6	93.6	95.8	¹ 93.2

¹ Average for 10 months.

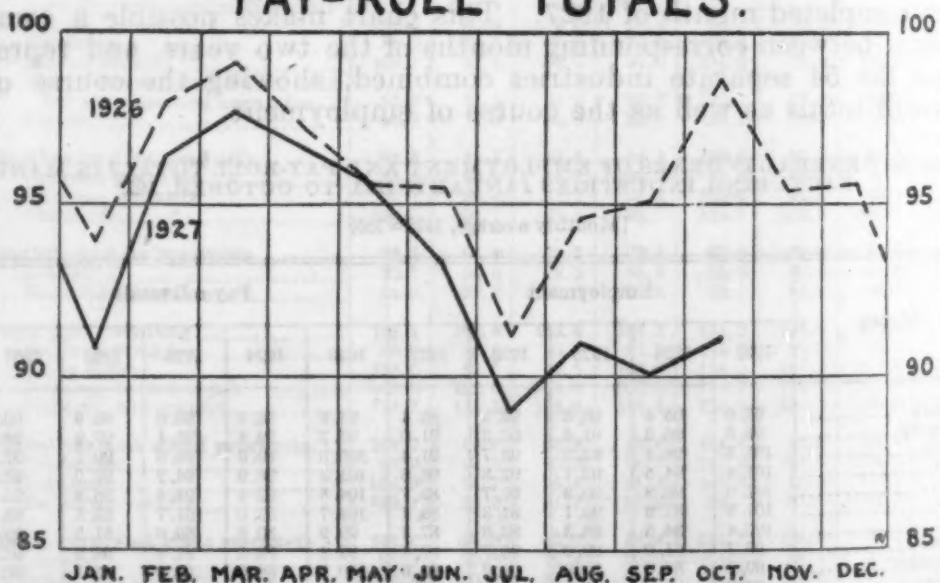
MANUFACTURING INDUSTRIES.
MONTHLY INDEXES - 1926 & 1927.

MONTHLY AVERAGE 1923 = 100.

EMPLOYMENT.



PAY-ROLL TOTALS.



Proportion of Time Worked and Force Employed in Manufacturing Industries in October, 1927

REPORTS from 9,092 establishments in October, 1927, show that less than one-half of 1 per cent of these establishments were idle, 81 per cent were operating on a full-time schedule, and 19 per cent on a part-time schedule; 40 per cent had a full normal force of employees, and 60 per cent were operating with reduced forces.

The establishments in operation were employing an average of 88 per cent of a normal full force of employees and were operating an average of 97 per cent of full time. These percentages indicate a drop of 1 per cent in average force employed, with no change in average operating time.

TABLE 8.—ESTABLISHMENTS WORKING FULL AND PART TIME AND EMPLOYING FULL AND PART WORKING FORCE IN OCTOBER, 1927

Industry	Establishments reporting—		Per cent of establishments operating—		Average per cent of full time operated by establishments operating	Per cent of establishments operating with—		Average per cent of normal full force employed by establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Food and kindred products								
Slaughtering and meat packing	1,439	(1)	88	12	98	51	48	92
Confectionery	156	—	89	11	99	47	53	92
Ice cream	232	—	90	10	99	32	68	86
Flour	170	1	95	4	99	6	94	69
Baking	284	(1)	80	20	94	60	39	96
Sugar refining, cane	586	(1)	89	11	98	70	30	98
	11	—	73	27	91	27	73	83
Textiles and their products								
Cotton goods	1,444	(1)	84	15	98	47	53	92
Hosiery and knit goods	421	—	91	8	100	57	43	97
Silk goods	180	2	81	17	97	56	42	93
Woolen and worsted goods	158	—	77	23	97	44	56	92
Carpets and rugs	168	1	84	15	98	38	61	88
Dyeing and finishing textiles	20	—	80	20	95	40	60	84
Clothing, men's	85	—	76	24	98	41	59	91
Shirts and collars	167	1	85	14	97	48	51	92
Clothing, women's	59	—	90	10	98	47	53	93
Millinery and lace goods	142	—	80	20	97	28	72	84
	44	—	84	16	97	34	66	80
Iron and steel and their products								
Iron and steel	1,545	1	84	36	94	22	77	83
Cast-iron pipe	156	5	67	28	94	18	77	79
Structural ironwork	33	3	45	52	85	21	76	84
Foundry and machine-shop products	136	—	84	16	98	36	64	84
Hardware	849	—	61	39	93	16	84	81
Machine tools	57	—	40	60	91	11	89	83
Steam fittings and steam and hot-water heating apparatus	133	—	69	31	95	18	82	81
Stoves	98	—	67	33	94	42	58	91
	83	—	67	33	94	58	42	95
Lumber and its products								
Lumber, sawmills	972	(1)	85	15	98	35	64	87
Lumber, millwork	408	1	88	11	97	33	66	85
Furniture	207	—	80	20	98	23	77	79
	357	—	83	17	98	45	55	93
Leather and its products								
Leather	308	(1)	81	18	97	43	57	92
Boots and shoes	111	—	88	12	98	29	71	87
	197	1	78	22	96	50	49	95
Paper and printing								
Paper and pulp	755	(1)	91	8	99	61	39	96
Paper boxes	172	2	86	12	97	51	48	95
Printing, book and job	158	—	88	12	99	53	47	96
Printing, newspapers	271	—	91	9	99	58	42	96
	154	—	100	—	100	85	15	100
Chemicals and allied products								
Chemicals	315	1	82	17	98	27	72	74
Fertilizers	103	—	95	5	99	45	55	91
Petroleum refining	170	1	71	28	96	14	85	61
	42	—	98	2	100	40	60	83

¹ Less than one-tenth of 1 per cent.

TABLE 8.—ESTABLISHMENTS WORKING FULL AND PART TIME AND EMPLOYING FULL AND PART WORKING FORCE IN OCTOBER, 1927—Continued

Industry	Establishments reporting—		Per cent of establishments operating—		Average per cent of full time operated by establishments operating	Per cent of establishments operating with—		Average per cent of normal full force employed by establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Stone, clay, and glass products	563	2	81	17	97	39	68	85
Cement	77		97	3	99	30	70	90
Brick, tile, and terra cotta	338	3	76	21	96	27	70	82
Pottery	55		64	36	94	38	62	89
Glass	93		95	5	99	35	65	89
Metal products, other than iron and steel	191		72	28	95	25	75	84
Stamped and enameled ware	60		83	17	98	35	65	87
Brass, bronze, and copper products	131		66	34	94	21	79	83
Tobacco products	123		79	21	97	52	48	95
Chewing and smoking tobacco and snuff	24		75	25	96	46	54	94
Cigars and cigarettes	99		80	20	97	54	46	95
Vehicles for land transportation	1,090	⁽¹⁾	85	15	98	41	59	89
Automobiles	149	1	60	39	95	32	67	80
Carriages and wagons	57		81	19	98	23	77	79
Car building and repairing, electric railroad	358		80	11	99	61	39	96
Car building and repairing, steam railroad	526	⁽¹⁾	80	11	99	32	68	88
Miscellaneous industries	347	⁽¹⁾	71	29	96	32	68	83
Agricultural implements	81	1	70	28	97	23	75	77
Electrical machinery, apparatus, and supplies	143		68	32	95	35	65	88
Pianos and organs	31		77	23	98	42	58	87
Rubber boots and shoes	10		70	30	96	80	20	104
Automobile tires	47		64	36	94	26	74	78
Shipbuilding, steel	35		91	9	99	23	77	72
All industries	9,092	⁽¹⁾	81	19	97	40	60	88

¹ Less than one-half of 1 per cent.

Employment and Total Earnings of Railroad Employees, September, 1926, and August and September, 1927

THE number of employees on the 15th of September, 1927, and the total earnings of employees in the entire month of September, 1927, on Class I Railroads of the United States, are shown in the table following, together with similar information for August, 1927, and September, 1926. The data are presented for all occupations combined, excluding executives and officials, and also for the 6 general groups of occupations; under each group data are shown separately for a few of the more important occupations.

Class I Railroads are roads having operating revenues of \$1,000,000 a year and over.

EMPLOYMENT AND TOTAL MONTHLY EARNINGS OF RAILROAD EMPLOYEES—
SEPTEMBER, 1926, AND AUGUST AND SEPTEMBER, 1927

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	1926		1927		1926	
	Septem- ber	August	Septem- ber	Septem- ber	August	Septem- ber
Professional, clerical, and general.						
Clerks.....	287,373	280,926	279,745	\$39,323,387	\$40,487,030	\$39,585,069
Stenographers and typists.....	168,840	162,806	162,016	21,859,841	22,335,860	21,714,252
	25,587	25,248	25,083	3,135,996	3,243,792	3,170,307
Maintenance of way and structures.						
Laborers, extra gang and work train.....	458,067	470,563	454,129	42,222,412	45,287,945	41,487,966
Laborers, track and roadway section.....	79,908	80,033	80,626	6,376,616	7,444,254	6,260,893
	233,986	240,289	233,990	17,212,062	18,652,275	16,859,456
Maintenance of equipment and stores.						
Carmen.....	517,578	482,397	480,999	66,904,496	65,683,390	62,816,643
Machinists.....	113,863	103,762	103,790	16,568,659	16,159,743	15,358,527
Skilled trades helpers.....	60,332	57,490	57,836	9,434,917	9,340,734	9,006,795
Laborers (shops, engine houses, power plants, and stores).....	113,916	106,338	105,944	12,441,902	12,270,224	11,684,688
Common laborers (shops, engine houses, power plants, and stores).....	42,451	40,464	40,369	3,964,312	3,936,442	3,709,321
	60,401	55,258	54,472	4,831,185	4,679,392	4,300,541
Transportation, other than train, engine, and yard.						
Station agents.....	213,434	205,428	207,191	26,007,290	26,194,390	25,703,568
Telegraphers, telephoners, and towermen.....	30,683	30,413	30,327	4,748,683	4,895,650	4,757,548
Truckers (stations, warehouses, and platforms).....	25,649	24,407	24,464	3,806,981	3,814,018	3,712,754
Crossing and bridge flagmen and gatemen.....	40,216	35,680	37,821	3,727,479	3,549,740	3,635,708
	22,419	22,006	21,921	1,688,994	1,703,711	1,689,082
Transportation (yardmasters, switch tenders, and hostlers).						
Road conductors.....	24,204	23,086	23,146	4,498,230	4,580,906	4,451,053
Road brakemen and flagmen.....	337,648	316,740	325,550	67,776,932	67,291,663	67,050,110
Yard brakemen and yard helpers.....	38,430	36,401	37,080	9,162,016	9,130,376	9,076,401
Road engineers and motormen.....	77,568	72,090	74,141	13,707,381	13,394,436	13,436,554
Road firemen and helpers.....	55,537	51,739	53,545	9,530,748	9,675,523	9,668,729
	45,808	43,323	44,402	12,362,969	12,075,398	12,062,898
All occupations.....	47,031	44,217	45,386	9,188,065	9,074,009	9,048,616

Unemployment in Cuban Towns

THE following statement of the number of unemployed persons in various Cuban towns was included in a report from American vice consul, William B. Murray, at Habana, dated September 17, 1927, and is said to be a conservative estimate obtained from persons with a knowledge of existing conditions:

NUMBER OF UNEMPLOYED IN SPECIFIED CUBAN TOWNS

Town	Popula-tion	Unem-ployed	Town	Popula-tion	Unem-ployed
Guines.....	13,679	400	San Antonio.....	10,645	300
Melena.....	2,608	150	Rincon.....	1,830	30
Quivicán.....	2,194	100	Guira.....	6,147	250
Bejucal.....	2,019	100	Alquizar.....	4,875	100
Madruga.....	2,911	100	Artemisa.....	4,472	200
Guanajay.....	6,545	140	Candelaria.....	3,092	100

While the number of unemployed in the Provinces of Havana and Pinar del Rio is much larger this year, in the rural districts there are fewer unemployed since the farm work occupies a greater part of the people. Daily wages vary from 70 cents to \$1.50 for skilled work.

State Reports on Employment

California

THE following data, taken from the October, 1927, issue of the Labor Market Bulletin, issued by the State department of industrial relations, show changes in number of employees and in amount of weekly pay roll of 792 industrial establishments in California from September, 1926, to September, 1927:

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN 792 CALIFORNIA ESTABLISHMENTS BETWEEN SEPTEMBER, 1926, AND SEPTEMBER, 1927

Industry	Number of establish- ments reporting	Employees		Weekly pay roll	
		Number in Sep- tember, 1927	Per cent of change as com- pared with Sep- tember, 1926	Amount in Sep- tember, 1927	Per cent of change as com- pared with Sep- tember, 1926
Stone, clay, and glass products:					
Miscellaneous stone and mineral products.....	12	1,612	+14.0	\$53,223	+15.9
Lime, cement, plaster.....	7	1,720	-13.4	55,030	-15.9
Brick, tile, pottery.....	23	3,152	+15.8	86,190	+24.4
Glass.....	9	871	+8.2	28,204	+8.1
Total.	51	7,355	+6.2	222,647	+7.7
Metals, machinery, and conveyances:					
Agricultural implements.....	6	1,467	+31.7	42,481	+40.0
Automobiles, including bodies and parts.....	15	1,981	-37.5	63,117	-36.1
Brass, bronze, and copper products.....	10	1,439	-11.0	41,774	-3.4
Engines, pumps, boilers, and tanks.....	10	1,031	-3.8	31,814	-7.1
Iron and steel forging, bolts, nuts, etc.....	7	2,199	-13.6	69,633	-11.2
Structural and ornamental steel.....	21	4,455	-5.9	142,277	+1.2
Ship and boat building and naval repairs.....	6	5,264	-1.3	189,310	+16.1
Tin cans.....	7	2,011	-33.1	58,557	-29.7
Other iron foundry and machine-shop products.....	71	6,813	-14.2	205,037	-9.1
Other sheet-metal products.....	21	1,463	-7.9	43,065	-11.4
Cars, locomotives, and railway repair shops.....	18	7,590	-2.7	235,732	+5.1
Total.	192	35,713	-10.5	1,122,797	-4.1
Wood manufactures:					
Sawmills and logging.....	24	13,399	+5.8	401,756	+5.4
Planing mills, sash and door factories, etc.....	59	10,444	0	311,582	+2.6
Other wood manufactures.....	43	4,925	+9.8	146,439	+19.9
Total.	126	28,768	+4.2	859,777	+6.6
Leather and rubber goods:					
Tanning.....	8	923	+8.3	26,598	+16.7
Finished leather products.....	5	465	-10.2	10,550	-13.5
Rubber products.....	7	2,442	-17.8	73,143	-13.5
Total.	20	3,830	-11.7	110,291	-7.7

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN 792 CALIFORNIA ESTABLISHMENTS BETWEEN SEPTEMBER, 1926, AND SEPTEMBER, 1927—Continued

Industry	Number of establishments reporting	Employees		Weekly pay roll	
		Number in September, 1927	Per cent of change as compared with September, 1926	Amount in September, 1927	Per cent of change as compared with September, 1926
Chemicals, oils, paints, etc.:					
Explosives	4	503	-1.9	\$15,252	-0.5
Mineral oil refining	7	10,246	-20.8	408,173	-12.1
Paints, dyes, and colors	8	687	-1	16,529	-5.2
Miscellaneous chemical products	14	1,915	-16.3	49,263	-15.5
Total	33	13,351	-18.7	489,217	-11.9
Printing and paper goods:					
Paper boxes, bags, cartons, etc.	14	2,204	+4.2	58,489	+14.7
Printing	61	2,386	-3.1	84,593	-5.2
Publishing	17	3,862	-4	147,319	+1.7
Other paper products	10	1,190	-1.7	29,802	+6.8
Total	102	9,642	-2	320,203	+2.3
Textiles:					
Knit goods	12	1,074	-2.0	24,358	+6.8
Other textile products	6	1,616	-2.2	36,015	+3.6
Total	18	2,690	-2.1	60,373	+4.8
Clothing, millinery, and laundering:					
Men's clothing	26	2,899	-3.9	50,900	-7.9
Women's clothing	10	1,030	+14.4	21,210	+14.1
Millinery	7	792	+10.5	14,448	+1.0
Laundering, cleaning, and dyeing	19	3,226	+5.4	72,268	+4.7
Total	62	7,947	+3.2	167,826	+5
Foods, beverages, and tobacco:					
Canning, preserving of fruits and vegetables	35	27,242	+10.6	626,165	+12.9
Canning, packing of fish	6	1,316	+36.8	21,837	+9.6
Confectionery and ice cream	27	2,124	+8	58,490	+15.5
Groceries, not elsewhere specified	5	576	+3.2	15,546	+25.2
Bread and bakery products	19	3,408	-1.5	92,310	-7
Sugar	5	3,548	-4.3	99,844	+3.7
Slaughtering and meat products	15	2,715	+2.8	80,971	+4.7
Cigars and other tobacco products	5	988	-2.0	16,853	-2.1
Beverages	2	153	-18.2	5,934	-22.9
Dairy products	11	2,731	+6	86,131	+1.4
Flour and grist mills	13	1,109	-13.6	30,493	-12.7
Ice manufactures	14	1,153	-3.2	38,841	-1.1
Other food products	13	1,242	-8.9	24,576	-11.7
Total	170	48,305	+5.4	1,197,901	+7.4
Water, light, and power:					
Miscellaneous	5	7,667	-14.0	231,101	-12.0
	13	2,111	-6.1	59,312	+6.8
Grand total, all industries	792	167,379	-2.9	4,841,535	+2

Illinois

THE September, 1927, issue of the Labor Bulletin, published by the Illinois Department of Labor, contains the following statistics showing the changes in employment and earnings in Illinois factories in August, 1927, as compared with July, 1927:

CHANGES IN EMPLOYMENT AND EARNINGS IN ILLINOIS FACTORIES FROM JULY TO AUGUST, 1927

Industry	Per cent of change from July to August, 1927			Total earnings	
	Employment				
	Males	Females	Total employees		
Stone, clay, and glass products:					
Miscellaneous stone and mineral products.....	-0.3	-4.0	-0.4	+5.9	
Lime, cement, and plaster.....	-1.9	.0	-1.8	-13.8	
Brick, tile, and pottery.....	+2.6		+2.7	+5.1	
Glass.....	-4.6	-10.7	-5.8	+.6	
Total.....	-.6	-9.6	-1.4	+2.9	
Metals, machinery, conveyances:					
Iron and steel.....	+1.2	+6.1	+1.3	+5.1	
Sheet-metal work and hardware.....	+2.8	-1.6	+3.1	+1.9	
Tools and cutlery.....	-5.2	-31.0	-7.2	+2.0	
Cooking, heating, ventilating apparatus.....	+3.0	-3.8	+2.8	+6.6	
Brass, copper, zinc, babbitt metal.....	-.1	+9.1	.0	-.3	
Cars and locomotives.....	-1.8	-5.5	-1.9	+9.1	
Automobiles and accessories.....	+.7	+2.3	.9	+12.0	
Machinery.....	-1.0	-1.6	-.5	+.8	
Electrical apparatus.....	+8.6	+21.7	+4.8	+17.8	
Agricultural implements.....	-.2	+4.2	-.2	+1.4	
Instruments and appliances.....	-2.0	+12.8	.8	+5.9	
Watches, watch cases, clocks, and jewelry.....	+50.9	+64.3	+56.5	+7.8	
Total.....	+2.3	+19.6	+3.6	+5.5	
Wood products:					
Sawmill and planing-mill products.....	-2.3	-10.3	-2.4	+1.0	
Furniture and cabinet work.....	+2.3	+2.6	+2.2	+14.6	
Pianos, organs, and other musical instruments.....	+2.1	+3.2	+3.1	+25.4	
Miscellaneous wood products.....	-2.3	-18.9	-3.8	-2.4	
Household furnishings.....	+.8	+.7	.8	-2.2	
Total.....	+.6	-2.1	.5	+9.6	
Furs and leather goods:					
Leather.....	+3.1	+3.0	+3.1	-1.4	
Furs and fur goods.....	+3.2	+12.5	+7.3	+7.2	
Boots and shoes.....	+2.6	+5.6	+4.5	+12.8	
Miscellaneous leather goods.....	+2.5	+3.0	+2.8	+15.4	
Total.....	+2.7	+4.9	+4.2	+10.4	
Chemicals, oils, paints, etc.:					
Drugs and chemicals.....	+.3	+51.6	+18.6	+17.6	
Paints, dyes, and colors.....	-.5	+4.5	-2.7	-5.1	
Mineral and vegetable oil.....	-1.9	+1.8	-1.6	-4.1	
Miscellaneous chemical products.....	+1.9	+.4	+1.7	+3.1	
Total.....	+.2	+21.8	+2.4	+.9	
Printing and paper goods:					
Paper boxes, bags, and tubes.....	+5.2	+3.5	+4.7	+4.2	
Miscellaneous paper goods.....	-.2	+3.4	+1.3	+1.5	
Job printing.....	-3.3	-.5	-2.7	-8.4	
Newspapers and periodicals.....	-3.9	.0	-4.6	-.9	
Edition bookbinding.....	+40.7	+86.0	+53.7	+34.6	
Total.....	+1.9	+10.8	+3.3	-1.0	

CHANGES IN EMPLOYMENT AND EARNINGS IN ILLINOIS FACTORIES FROM JULY TO AUGUST, 1927—Continued

Industry	Per cent of change from July to August, 1927			
	Employment			Total earnings
	Males	Females	Total employees	
Textiles:				
Cotton and woolen goods	-2.9	-7.8	-5.0	+3.1
Knit goods, cotton and woolen hosiery	+10.1	+15.1	-22.4	-23.9
Thread and twine	+10.0	-3.0	+.8	-.5
Total	+2.9	+.1	-16.3	-14.7
Clothing, millinery, laundering:				
Men's clothing	-2.4	+1.6	+.4	-.2
Men's shirts and furnishings	+5.9	-16.9	+2.5	-.3
Overalls and work clothing	+1.8	-.8	-.7	+12.2
Men's hats and caps	+2.5	+4.0	+3.1	-5.5
Women's clothing	+5.7	+3.7	+4.2	-3.5
Women's underwear	+3.5	+10.5	+4.3	-7.4
Women's hats	+4.7	+29.8	+22.9	+47.8
Laundering, cleaning, and dyeing	-1.7	-4.2	-3.3	-5.6
Total	-1.6	+1.5	+.9	-.5
Food, beverages, and tobacco:				
Flour, feed, and other cereal products	+6.6	+47.4	+10.3	+12.9
Fruit and vegetable canning and preserving	-51.6	-46.2	-50.9	-74.4
Miscellaneous groceries	+3.6	+.3	-2.3	+18.2
Slaughtering and meat packing	-2.5	+1.0	-2.1	-4.6
Dairy products	+.5	-.9	+.5	+.2
Bread and other bakery products	+1.1	-.2	+.7	+1.5
Confectionery	-.3	-6.0	-3.9	-5.1
Beverages	-15.6	.0	-22.0	-16.4
Cigars and other tobacco products	+2.2	.0	+.9	+11.5
Manufactured ice	-1.8		-1.8	-5.4
Ice cream	-6.2	-12.0	-6.7	-9.3
Total	-4.0	-1.9	-4.3	-5.3
Total, all manufacturing industries	+.7	+7.5	+1.4	+2.4
Trade—Wholesale and retail:				
Department stores	-2.9	+3.8	+.7	+1.6
Wholesale dry goods	+.4	+2.6	+1.4	+1.4
Wholesale groceries	+3.9	-7.1	-.0	-.2
Mail-order houses	+1.7	-1.4	-.6	-2.6
Total	+.8	-.3	-.3	-1.7
Public utilities:				
Water, light, and power	+1.8	-1.9	+1.1	+.7
Telephone	-.2	-.5	-.4	+.2
Street railways	-.2	+23.5	-.3	+2.6
Railway car repair shops	+.3	-3.1	+.2	+26.3
Total	+.1	-.5	+.0	+4.1
Coal mining	+10.0		+10.0	+14.4
Building and contracting:				
Building construction	+10.0		+10.0	+13.4
Road construction	+17.9		+17.9	+19.5
Miscellaneous contracting	-10.8		-10.8	+5.5
Total	+7.6		+7.6	+12.6
Grand total, all industries	+.9	+3.9	+1.2	+3.1

Iowa

THE October, 1927, issue of the Iowa Employment Survey, published by the bureau of labor of that State, shows the following changes in volume of employment from September to October, 1927:

CHANGES IN VOLUME OF EMPLOYMENT IN IOWA, SEPTEMBER TO OCTOBER, 1927

Industry	Employees on pay roll, October, 1927			Industry	Employees on pay roll, October, 1927		
	Number of firms reporting	Number	Per cent of change as compared with September, 1927		Number of firms reporting	Number	Per cent of change as compared with September, 1927
Food and kindred products:				Leather products:			
Meat packing.....	8	6,453	-1.5	Shoes.....	3	448	+5.7
Cereals.....	2	1,094	-3.5	Saddlery and harness.....	6	209	+9.4
Flour.....	3	118	-1.7	Fur goods and tanning.....	3	52	+10.6
Bakery products.....	8	970	-4	Gloves and mittens.....	2	228	.0
Confectionery.....	4	125	-4.6	Total.....	14	937	+5.3
Poultry, produce, butter, etc.	4	379	+18.1	Paper products, printing and publishing:			
Sugar, starch, sirup, glucose, etc.....	4	2,221	+25.5	Paper products.....	5	353	+3.2
Other food products, coffee, etc.....	7	357	-31.4	Printing and publishing.....	13	2,187	-2.7
Total.....	40	11,717	+1.7	Total.....	18	2,540	-1.9
Textiles:				Patent medicines, chemicals and compounds.....	8	372	-.8
Clothing, men's.....	9	964	+7.1	Stone and clay products:			
Millinery.....	2	127	11.8	Cement, plaster, gypsum.....	8	1,752	-5.3
Clothing, women's, and woolen goods.....	3	621	+6.9	Brick and tile.....	15	1,177	-2.8
Hosiery, awnings, etc.....	5	704	+1.1	Marble and granite, crushed rock, and stone.....	3	88	+6.0
Buttons, pearl.....	7	629	+14.2	Total.....	26	3,017	-4.0
Total.....	26	3,135	+5.9	Tobacco and cigars.....	3	245	+.4
Iron and steel works:				Railway car shops.....	3	7,679	+1.2
Foundry and machine shops.....	25	2,477	+1.1	Various industries:			
Brass, bronze products, plumbers' supplies.....	5	553	.0	Auto tires and tubes.....	2	164	+3.1
Auto's, tractors, and engines.....	6	2,052	-.9	Brooms and brushes.....	5	152	+9.4
Furnaces.....	5	389	+5.1	Laundries.....	4	161	-1.2
Pumps.....	5	367	-2.1	Mercantile.....	8	2,918	-2.0
Agricultural implements.....	11	1,149	-3.8	Public service.....	3	3,721	.0
Washing machines.....	8	2,414	+5.0	Seeds.....	2	316	+26.9
Total.....	65	9,401	+1.0	Wholesale houses.....	27	1,340	.0
Lumber products:				Commission houses.....	10	330	+7.8
Millwork, interiors, etc.....	16	3,070	-1.3	Other industries.....	7	1,226	+1.6
Furniture, desks, etc.....	7	891	-3.8	Total.....	68	10,328	+.7
Refrigerators.....	3	97	-6.7	Grand total.....	307	53,695	+.7
Coffins, undertakers' supplies.....	5	154	.0				
Carriages, wagons, truck bodies.....	5	103	-8.9				
Total.....	36	4,324	-2.1				

Maryland

THE following report on volume of employment in Maryland from September to October, 1927, was furnished by the Commissioner of Labor and Statistics of Maryland:

CHANGES IN EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARYLAND,
SEPTEMBER TO OCTOBER, 1927

Industry	Establishments reporting for both months	Employment		Pay roll	
		Number of employees, October, 1927	Per cent of change as compared with September, 1927	Amount, October, 1927	Per cent of change as compared with September, 1927
Beverages and soft drinks	4	169	-7.7	\$4,978	-7.9
Boots and shoes	7	1,327	-1.2	21,915	-13.3
Boxes, paper and fancy	6	392	-3	5,355	+4.3
Boxes, wooden	4	171	-1.8	2,632	+4
Brass and bronze	3	2,111	-2.1	52,842	-3.6
Brick, tile, etc.	5	671	+1.8	15,976	-12.9
Brushes	4	564	-2	10,338	-3
Car building and repairing	4	361	+1.4	12,004	+1.2
Chemicals	5	1,225	-7.2	34,420	-1.3
Clothing, men's outer garments	3	1,490	-19.7	25,986	-34.5
Clothing, women's outer garments	5	812	+9.1	9,156	-6.3
Confectionery	6	1,040	+1.5	14,911	+14.9
Cotton goods	4	1,420	-1.5	20,225	+1.3
Fertilizer	3	590	-13.4	11,222	-26.7
Food preparation	3	91	+10.9	2,343	+8.6
Foundry	9	1,094	-4	28,127	+2.5
Furnishing goods, men's	5	1,045	+7.6	13,662	-1.9
Furniture	10	951	+15.4	25,191	+13.1
Glass manufacture	3	862	+27.8	15,805	+5.7
Ice cream	3	165	-5.2	5,376	-5.6
Leather goods	4	575	-3.7	10,446	-18.4
Lithographing	3	518	-2	15,600	+1.6
Lumber and planing	8	599	-2.0	15,490	-3.6
Mattresses and spring beds	4	165	-6.8	4,701	-6.2
Pianos	3	907	+14.5	27,042	+14.4
Plumbers' supplies	4	1,130	+4.5	29,801	+13.7
Printing	7	847	+3.9	28,550	+6.1
Rubber tires, manufacturing	1	2,593	-5.0	144,474	-13.9
Shipbuilding	3	661	-19.1	18,165	-11.9
Silk goods	3	409	-2.2	6,062	-4.6
Shirts	4	508	+2.1	8,550	+6.1
Stamping and enameling ware	4	1,063	-3.5	21,442	-3.9
Tinware	4	2,830	-13.1	60,888	-19.9
Tobacco	6	588	-2.9	8,615	+2.9
Miscellaneous	19	5,217	+3.8	113,258	+.9

Massachusetts

A PRESS release from the Department of Labor and Industries of Massachusetts shows the following changes in volume of employment in various industries in that State from August, 1927, to September, 1927:

NUMBER OF EMPLOYEES IN 1,010 MANUFACTURING ESTABLISHMENTS IN MASSACHUSETTS, WEEK INCLUDING OR ENDING NEAREST TO AUGUST 15 AND SEPTEMBER 15, 1927

Industry	Number of establishments	Number of wage earners employed		
		August, 1927	September, 1927	
			Full time	Part time
Bookbinding	15	916	815	110
Boot and shoe cut stock and findings	40	2,202	2,275	17
Boots and shoes	80	24,754	21,782	2,705
Boxes, paper	27	2,089	2,117	37
Boxes, wooden packing	12	926	833	74
Bread and other bakery products	48	4,403	4,308	907
Carpets and rugs	5	3,422	1,713	1,734
Cars and general shop construction and repairs, steam railroads	4	2,814		2,841
Clothing, men's	28	4,045	3,686	562
Clothing, women's	32	1,412	1,243	234
Confectionery	17	3,881	4,046	94
Copper, tin, sheet iron, etc.	15	477	488	35
Cotton goods	51	39,298	35,586	4,470
Cutlery and tools	20	2,075	1,499	594
Dyeing and finishing textiles	9	6,587	6,612	
Electrical machinery, apparatus, and supplies	15	8,953	8,913	564
Foundry products	26	2,604	1,778	892
Furniture	36	3,569	3,317	398
Gas and by-products	13	1,211	1,126	90
Hosiery and knit goods	12	4,419	4,467	84
Jewelry	32	2,192	1,623	721
Leather, tanned, curried, and finished	32	6,338	6,365	148
Machine-shop products	44	5,212	4,700	477
Machine and other tools	25	2,629	2,114	573
Motor vehicles, bodies and parts	16	2,614	1,131	1,529
Musical instruments	13	1,003	679	273
Paper and wood pulp	26	6,271	5,085	1,171
Printing and publishing, book and job	50	3,887	3,619	151
Printing and publishing, newspaper	17	2,038	2,081	
Rubber footwear	3	8,860	7,705	1,327
Rubber goods	7	2,633	2,616	95
Silk goods	10	4,057	1,627	2,423
Slaughtering and meat packing	5	1,535	294	1,258
Stationery goods	11	1,761	1,771	59
Steam fittings and steam and hot-water heating apparatus	9	1,709	1,184	532
Stoves and stove linings	5	1,523	501	1,023
Textile machinery and parts	12	4,025	555	3,511
Tobacco	5	647	429	209
Woolen and worsted goods	55	17,938	13,657	4,525
All other industries	128	30,571	25,447	5,532
Total, all industries	1,010	227,590	189,787	41,072
				230,859

New Jersey

THE New Jersey Department of Labor has furnished the following data showing the changes in volume of employment and pay roll from August to September, 1927, in 847 establishments in that State:

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN 847 NEW JERSEY ESTABLISHMENTS, SEPTEMBER, 1927,
COMPARED WITH AUGUST, 1927

Industry	Number of plants reporting	Employees		Weekly pay roll	
		Number in Sep- tember, 1927	Per cent of change as com- pared with August, 1927	Amount in Sep- tember, 1927	Per cent of change as com- pared with August, 1927
Food and kindred products:					
Baking	16	1,401	+1.7	\$45,700	+0.1
Canning and preserving	8	5,673	+46.6	145,838	+76.5
Confectionery and ice cream	7	375	+8.4	8,991	+2.6
Provisions	3	1,347	+1.1	41,042	+6.8
Other food products	12	2,809	-7.0	84,560	-3.3
Total.	46	11,605	+16.7	326,140	+24.0
Textiles and their products:					
Carpets and rugs	3	1,197	+1.2	33,595	-1.6
Clothing	29	4,077	+1	81,366	+1.0
Cotton goods	15	7,246	+1.3	139,011	+3.9
Dyeing and finishing textiles	38	12,164	+8.2	302,015	+3.8
Hats and caps	6	1,095	-3.0	35,107	-4.0
Hosiery and knit goods	17	3,819	+1.5	103,950	-1.1
Millinery and lace	9	835	-3.1	15,304	+6.6
Shirts and collars	9	2,050	+1.7	38,885	+4.1
Silk goods	57	8,466	-5	204,586	+1
Woolen and worsted goods	18	10,314	+1.9	273,281	-5.8
Miscellaneous textile products	10	1,837	-1	42,767	+1.8
Total.	211	53,100	+2.3	1,269,867	+1
Iron and steel and their products:					
Cast-iron pipe	6	3,414	-3	98,181	-5.9
Electrical machinery, apparatus, and supplies	28	19,598	-3	517,009	+1
Foundry and machine-shop products	79	17,523	-4.0	520,311	-2.1
Hardware	7	881	-9	25,434	+3
Iron and steel forgings	8	864	+3.1	28,048	+16.1
Machine tools	21	3,372	+1.1	92,019	-1.5
Steam fittings and steam and hot-water heating apparatus	13	3,959	+3.8	121,501	+7.1
Structural-iron work	10	1,609	+4.0	45,075	+4.5
Total.	172	51,220	-1.0	1,448,268	-3
Lumber and its products:					
Furniture	5	1,230	-6	35,642	-5
Lumber and millwork	13	681	-1.9	19,880	-9
Total.	18	1,911	-1.0	55,522	-7
Leather and its products:					
Boots and shoes	6	1,040	-12.2	26,084	-15.3
Leather	21	3,270	+1.8	96,942	-1.1
Leather products	4	513	+2	11,932	+6.0
Total.	31	4,823	-1.8	134,958	-3.6
Tobacco products	12	3,807	+8.9	70,590	+11.5
Paper and printing:					
Paper and pulp	22	4,055	+6.7	113,139	+9.2
Paper boxes	18	1,563	+2.6	31,075	+1.3
Printing, book and job	12	2,097	-6.2	64,130	-9.6
Printing, newspaper	10	1,908	-2.0	84,330	+3.5
Total.	62	9,713	+1.2	292,674	+2.1
Chemicals and allied products:					
Chemicals	42	8,924	+1.5	252,105	+1.3
Explosives	6	2,433	+3.0	68,651	-3.3
Oils and greases	9	1,508	+5.7	41,086	-3.0
Paints and varnish	13	1,731	+2	51,747	-4.1
Petroleum refining	8	14,342	-1.9	490,228	+1.6
Total.	78	28,938	0.0	903,817	-3
Stone, clay, and glass products:					
Brick, tile, and terra cotta	26	4,182	-2.4	123,701	-6.9
Glass	7	2,909	-4	61,747	-5.0
Pottery	20	4,076	+1.0	130,189	+3
Other products	2	984	-1.0	37,081	+2.3
Total.	55	12,211	-7	352,718	-3.1

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN 847 NEW JERSEY ESTABLISHMENTS, SEPTEMBER, 1927, COMPARED WITH AUGUST, 1927—Continued

Industry	Number of plants reporting	Employees		Weekly pay roll	
		Number in September, 1927	Per cent of change as compared with August, 1927	Amount in September, 1927	Per cent of change as compared with August, 1927
Metal products, other than iron and steel:					
Brass, bronze, and copper products	10	593	-0.7	18,707	-5.6
Sheet-metal and enamel ware	21	4,452	+3.4	121,753	+2.4
Smelting and refining	9	3,779	+1.3	119,981	-1.1
Wire and wire goods	14	7,324	-7	185,393	-10.3
Total	54	16,148	+.9	445,924	-4.5
Vehicles for land transportation:					
Automobiles and parts	13	5,909	-4.7	187,449	-5.0
Car building and repairing, steam railroad	9	4,905	+2.5	146,275	+.8
Total	22	10,814	-1.6	333,724	-2.5
Miscellaneous industries:					
Cork and cork specialties	5	1,545	+3.8	30,156	-1.3
Jewelry and novelties	28	3,757	+.6	108,122	-.1
Laundries	8	965	-.4	19,329	-3.8
Musical instruments	4	8,283	+9.1	241,933	+11.7
Rubber tires and goods	28	9,109	-1.1	255,046	-.9
Shipbuilding	6	6,205	-.8	195,236	-1.3
Miscellaneous	7	3,119	+8.8	91,303	+3.0
Total	86	32,983	+2.7	950,215	+2.3
Grand total, all industries	847	237,273	+1.5	6,584,417	+.7

New York

THE following statistics of changes in number of employees and in amount of weekly pay rolls were furnished by the New York State Department of Labor. The figures are based on reports from a fixed list of about 1,600 factories, having in September 484,115 employees, the total of the weekly pay rolls for the middle week of September being \$14,317,345.

PER CENT OF CHANGE IN EMPLOYMENT AND IN PAY ROLLS IN NEW YORK STATE FACTORIES IN SEPTEMBER, 1927, COMPARED WITH SEPTEMBER, 1926, AND AUGUST, 1927

Industry	Per cent of change			
	August, 1927, to September, 1927		September, 1926, to September, 1927	
	Employees	Pay rolls	Employees	Pay rolls
Stone, clay, and glass	-0.6	+0.9	-9.3	-9.4
Miscellaneous stone and minerals	-2.2	+2.3	-9.4	-6.1
Lime, cement, and plaster	-2.6	-3.4	-9.7	-11.8
Cement	-4.6	-4.6	-9.4	-10.2
Brick, tile, and pottery	-3.6	-.2	-10.6	-11.4
Brick	-11.0	-6.0	-22.6	-25.7
Pottery	+6.1	+8.6	+8.1	+12.7
Glass	+10.1	+8.3	-6.5	-7.4
Metals and machinery	+.3	+.8	-7.2	-7.2
Silver and jewelry	+2.7	+5.3	-11.1	-12.1
Brass, copper, and aluminum	+2.4	+7.2	-2.9	-3.0
Iron and steel	-2.7	-1.4	-11.0	-14.9
Structural and architectural iron	-.6	+1.2	+16.6	+17.6
Sheet metal and hardware	-2.2	-2.2	-6.4	-6.6
Hardware	-4.6	-4.3	+8.2	+6.2
Stamped and enameled ware	-2.6	-3.6	-3.8	-1.1
Firearms, tools, and cutlery	-3.6	-2.5	-14.1	-11.2
Cutlery and tools	-2.8	-2.7	-11.6	-6.1
Cooking, heating, and ventilating apparatus	+3.4	+5.5	-5.2	-5.1
Steam and hot-water heating	+3.3	+4.6	-5.9	-6.4
Stoves	+2.9	+10.4	+23.7	+29.0

PER CENT OF CHANGE IN EMPLOYMENT AND IN PAY ROLLS IN NEW YORK
STATE FACTORIES IN SEPTEMBER, 1927, COMPARED WITH SEPTEMBER, 1926, AND
AUGUST, 1927—Continued

Industry	Per cent of change			
	August, 1927, to September, 1927		September, 1926, to September, 1927	
	Em- ployees	Pay rolls	Em- ployees	Pay rolls
Metals and machinery—Continued.				
Machinery, including electrical apparatus	+2.0	+1.3	-8.6	-6.5
Agricultural implements	-2.8	-8.6	-4.1	(¹)
Electrical machinery and apparatus	+6.1	+3.1	-5.0	-2.1
Foundries and machine shops	-1.9	-.1	-15.1	-13.7
Automobiles, carriages, and airplanes	+5.3	+9.7	-11.3	-12.6
Automobiles and parts	+5.4	+10.4	-11.6	-13.2
Railroad equipment and repair	-2.5	-4.6	-6.6	-7.6
Locomotives and equipment	-5.6	-8.4	-9.6	-15.1
Railway repair shops	-.6	-2.3	-4.9	-2.8
Boat and ship building	-7.5	-1.8	-19.0	-15.4
Instruments and appliances	-1.6	-1.9	+.1	-.3
Wood manufactures	+2.6	+5.8	-7.0	-6.6
Saw and planing mills	-1.6	+.9	-8.2	-4.8
Millwork	-3.7	-1.9	-7.6	-5.8
Sawmills	+1.9	+6.8	-4.3	+1.7
Furniture and cabinet work	+3.9	+6.0	-2.2	-3.5
Furniture	+3.9	+6.3	-.1	-1.7
Pianos and other musical instruments	+6.9	+13.9	-10.2	-10.8
Miscellaneous wood, etc.	-.3	+.6	-9.9	-8.1
Furs, leather, and rubber goods	+1.4	+1.7	+.3	+1.9
Leather	-2.1	-6.0	-7.0	-14.5
Furs and fur goods	+1.1	+2.0	-5.7	-5.3
Shoes	+.7	-.6	+2.4	+3.6
Other leather and canvas goods	+2.9	+8.7	+1.0	+8.6
Rubber and gutta percha	+5.4	+10.1	-.6	-2
Pearl, horn, bone, etc.	+5.5	+9.3	-10.4	-5.2
Chemicals, oils, paints, etc.	-1.2	(¹)	+4.4	+7.1
Drugs and chemicals	-2.8	-6.6	+5.7	+7.9
Paints and colors	(¹)	+1.2	(¹)	+.6
Oil products	-.4	+1.9	+1.7	+6.7
Petroleum refining	+.9	+2.1	+2.4	+3.4
Miscellaneous chemicals	-1.3	+2.3	+8.0	+8.7
Paper	+.7	+.4	-10.1	-12.2
Printing and paper goods	+5.2	+5.9	-.3	+1.4
Paper boxes and tubes	+5.8	+6.8	-4.0	-4.3
Miscellaneous paper goods	+3.4	+3.0	+1.8	+6.4
Printing and bookmaking	+5.4	+6.3	-.2	+1.2
Printing, newspaper	+.7	+2.7	+3.4	+8.4
Printing, book and job	+7.8	+8.3	-1.6	-1.8
Textiles	+2.4	+3.1	+.9	+1.5
Silk and silk goods	+7.0	+9.6	-3.6	+1.8
Wool manufactures	+1.8	+1.6	+.4	+2.3
Carpets and rugs	-.6	-1.2	+3.6	+5.6
Woolens and worsteds	+16.4	+16.4	-11.6	-9.6
Cotton goods	+.3	+3.0	+4.6	-3.0
Knit goods (except silk)	+3.2	+.4	+3.3	+2.6
Other textiles	+1.1	+5.1	-.3	+1.0
Dyeing and finishing	-.9	+1.1	+4	-1.0
Clothing and millinery	+5.1	+8.1	-.6	+4.8
Men's clothing	-.8	+1.8	-.3	+1.2
Men's furnishings	+4.6	+3.4	-6.9	+4
Shirts and collars	+3.9	+2.3	-8.0	+2.2
Women's clothing	+11.5	+17.4	+7.4	+11.6
Women's underwear	+6.9	+5.2	-14.2	-10.4
Women's headwear	+30.1	+29.0	+12.1	+7.7
Miscellaneous sewing	+3.5	+6.8	-6.6	-6.3
Laundering and cleaning	+3.1	+6.3	+5.0	+7.9
Food and tobacco	+5.3	+6.3	-.5	+.2
Flour, feed, and cereals	+5.3	-1.1	-3.0	-2.6
Flour	+8.7	+11.0	-4.7	-5.2
Canning and preserving	+44.2	+50.3	-6.4	-8.2
Other groceries	+3.0	+5.0	+8.8	+4.7
Sugar refining	-1.8	+1.0	+20.9	+11.1
Meat and dairy products	+1.4	+.9	-.8	-4.7
Meat packing	+2.4	+1.6	+.1	-3.1
Bakery products	+3.8	+6.4	+2.7	+3.5
Candy	+6.4	+10.6	-10.2	-4.8
Beverages	+.4	-2.3	-4.7	+.8
Tobacco	+1.6	+5.7	-2.2	-.6
Water, light, and power	+.7	+1.4	+.7	+1.7
Total	+2.0	+3.0	-3.2	-2.4

¹ Change of less than one-tenth of 1 per cent.² No change.

Pennsylvania

THE bureau of statistics of the Department of Labor and Industry of Pennsylvania furnished the following report on changes in employment, in weekly man-hours and in pay-roll totals in Pennsylvania from September to October, 1927:

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES, IN TOTAL WEEKLY MAN-HOURS, AND IN WEEKLY PAY ROLL IN 480 PENNSYLVANIA ESTABLISHMENTS BETWEEN SEPTEMBER AND OCTOBER, 1927

Industry	Number of plants reporting	Number of wage earners		Total weekly man-hours		Total weekly pay roll: Per cent of change September to October, 1927
		Week ending Oct. 15, 1927	Per cent of change as compared with September, 1927	Week ending Oct. 15, 1927	Per cent of change as compared with September, 1927	
Metal manufactures:						
Automobiles, bodies, and parts	15	9,093	-4.5	390,241	-9.7	-8.6
Car construction and repair	13	7,935	-2.1	351,445	-1.4	-1.2
Electrical machinery and apparatus	12	4,953	+2.7	242,982	+7.2	+8.1
Engines, machines, and machine tools	28	7,750	+2.6	370,830	+8.0	+10.7
Foundries and machine shops	43	7,370	-6	324,856	+4.0	+2.3
Heating appliances and apparatus	7	1,795	-6.2	81,052	-14.0	-11.7
Iron and steel blast furnaces	9	7,463	-1.4	341,498	-2.4	+.8
Iron and steel forgings	5	1,068	-14.8	34,370	-15.3	-20.8
Steel works and rolling mills	20	26,161	-1.9	1,085,851	-3.8	-4.0
Structural-iron works	10	1,486	-4.1	70,359	+4.4	+6.8
Miscellaneous iron and steel products	17	10,254	-2.2	460,613	+.8	+1.5
Hardware	6	1,118	-.5	49,125	+5.6	+5.6
Nonferrous metals	7	808	+2.0	39,162	+4.8	+5.1
Total	192	87,254	-1.7	3,848,384	-1.3	-.8
Textile products:						
Carpets and rugs	5	1,832	+16.5	90,948	+18.7	+23.8
Clothing	11	1,058	+1.2	46,252	+1.5	-4.1
Cotton goods	13	1,972	+.1	96,927	+10.8	+8.2
Silk goods	23	9,738	-1.8	428,825	+1.6	+3.4
Woolens and worsteds	8	2,504	-1.1	128,434	+8.3	+.9
Knit goods and hosiery	10	2,436	+4.0	115,298	+5.9	+13.0
Dyeing and finishing textiles	5	707	+2.9	34,037	+14.1	+13.2
Total	75	20,247	+.9	940,721	+5.8	+6.8
Foods and tobacco:						
Bakeries	17	1,485	+1.1	76,590	+1.9	+2.0
Confectionery and ice cream	12	2,722	-1.8	145,359	-3.6	-2.7
Slaughtering and meat packing	9	1,189	-.3	60,832	-.8	-1.5
Cigars and tobacco	5	252	-.4	9,425	-3.5	-4.4
Total	43	5,648	-.7	292,206	-1.6	-1.3
Building materials:						
Brick, tile, and terra-cotta products	13	2,384	-3.4	107,936	-7.5	-8.8
Cement	8	3,901	-5.4	234,501	-2.2	-4.2
Glass	13	4,039	+3.0	214,116	+3.9	+3.5
Total	34	10,924	-1.5	556,553	-1.0	-2.0
Construction and contracting:						
Buildings	15	1,381	-4.0	55,826	-3.6	-6.9
Street and highway	4	2,475	+1.6	128,265	-5.5	-5.2
General	9	2,252	-.1	114,695	+1.2	+3.6
Total	28	6,108	-.4	298,786	-2.6	-2.8
Chemicals and allied products:						
Chemicals and drugs	10	736	-1.9	43,207	-.9	-.8
Paints and varnishes	6	976	+.1	48,821	+15.9	+15.1
Total	16	1,712	-.8	92,028	+7.4	+7.4

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES, IN TOTAL WEEKLY MAN-HOURS, AND IN WEEKLY PAY ROLL IN 480 PENNSYLVANIA ESTABLISHMENTS BETWEEN SEPTEMBER AND OCTOBER, 1927—Continued

Industry	Number of plants reporting	Number of wage earners		Total weekly man-hours		Total weekly pay roll: Per cent of change September to October, 1927
		Week ending Oct. 15, 1927	Per cent of change as compared with September, 1927	Week ending Oct. 15, 1927	Per cent of change as compared with September, 1927	
Miscellaneous industries:						
Lumber and planing-mill products	18	1,196	+.6	55,254	+3.8	+6.2
Furniture	15	1,558	-3.2	76,516	-3.1	-2.5
Leather tanning	9	2,265	+1.6	114,480	+3.9	+3.2
Leather products	5	130	+8.6	6,275	+.6	-1.6
Boots and shoes	10	1,886	+1.9	89,253	+4.5	+6.5
Paper and pulp products	9	2,625	-1.5	141,517	-.9	-1.1
Printing and publishing	23	1,405	+.9	65,710	+3.5	+4.1
Rubber tires and goods	3	813	-.7	41,212	+1.5	+3.4
Total	92	11,887	+.1	590,217	+1.6	+2.1
Grand total, all industries	480	143,780	-1.1	6,618,895	-.0	+.1

Wisconsin

THE September, 1927, issue of the Wisconsin Labor Market, issued by the State industrial commission, contains the following data on volume of employment in Wisconsin industries in August, 1927:

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF PAY ROLL IN IDENTICAL ESTABLISHMENTS IN WISCONSIN FROM AUGUST, 1926, AND JULY, 1927, TO AUGUST, 1927

Industry	Per cent of change			
	July, 1927, to Au-gust, 1927		August, 1926, to Au-gust, 1927	
	Employ-ment	Pay roll	Employ-ment	Pay roll
Manual				
Agriculture	-2.4	-7.5	+8.0	-22.6
Logging	-11.0	-19.7	-1.0	-6.9
Mining	-1.2	+1.8	+6.1	+4.1
Lead and zinc	+5.1	+1.8	+14.3	+6.0
Iron	-15.0	+1.9	-11.1	+.4
Stone crushing and quarrying	+6.9	+14.3	+13.5	+10.0
Manufacturing	+1.7	+9.0	-3.5	-.9
Stone and allied industries	+4.1	-1.7	+15.4	+13.3
Brick, tile, and cement blocks	-1.0	+7.2	+3.5	+17.8
Stone finishing	+7.6	-5.5	+24.2	+11.2
Metal	+3.0	+15.6	-8.4	-3.2
Pig iron and rolling-mill products	+5.8	+10.3	-7.7	-22.9
Structural-iron work	-13.7	-22.2	-15.1	-16.0
Foundries and machine shops	-6	+8.3	-5.9	-1.5
Railroad repair shops	-.5	+1.5	+.9	+4.7
Stoves	+4.9	+25.4	-8.6	-12.3
Aluminum and enamel ware	+2.6	+33.5	+3.0	+7.2
Machinery	+2.7	+16.3	-16.6	-5.3
Automobiles	+16.5	+66.7	-13.8	+7.1
Other metal products	+.2	-2.2	-5.2	-14.5
Wood	+1.1	+6.7	-3.3	-1.6
Sawmills and planing mills	-.4	-.1	-9.6	-10.7
Box factories	+18.9	+27.7	+12.3	+10.0
Panel and veneer mills	-1.8	+13.2	-5.3	+5.1
Furniture	+.1	+14.7	-1.3	+.1
Sash, door, and interior finish	+1.2	+4.9	+1.8	+3.5
Other wood products	+1.4	+7.1	-6.2	-1.8

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF PAY ROLL IN IDENTICAL ESTABLISHMENTS IN WISCONSIN FROM AUGUST, 1926, AND JULY, 1927, TO AUGUST, 1927—Continued

Industry	Per cent of change			
	July, 1927, to Au-gust, 1927		August, 1926, to August, 1927	
	Employ-ment	Pay roll	Employ-ment	Pay roll
<i>Manual—Continued</i>				
Manufacturing—Continued.				
Rubber	+6.8	+22.7	+18.3	+19.6
Leather	+2.4	+8.3	-17.9	-18.3
Tanning	+4	+8.3	-39.3	-39.0
Boots and shoes	+1.4	+6.8	-16.2	-15.1
Other leather products	+5.6	+10.7	+13.5	+19.1
Paper	+1.9	+6.0	+3	+5.1
Paper and pulp mills	+1.6	+6.2	-3	+4.2
Paper boxes	+3.2	+7.4	+3	+4.1
Other paper products	+2.4	+3.6	+3.3	+10.0
Textiles	+5.6	+7.4	+10.9	+5.3
Hosiery and other knit goods	+4.9	+20.0	+10.2	+11.2
Clothing	+8.3	-6.1	+13.9	-2.6
Other textile products	+2.0	+1.9	+6.5	+5.6
Foods	-6.2	-5.4	-6.9	-5.7
Meat packing	+1.5	+2.3	-16.5	-15.7
Baking and confectionery	+0.9	+2.9	+4.0	-3.4
Milk products	-8.0	+8	+3.4	+24.0
Canning and preserving	-22.5	-24.0	-15.5	-18.1
Flour mills	+1.8	+7.7	+4.4	-2.2
Tobacco manufacturing	-3.4	-31.9	-2.3	-3.9
Other food products	+1.5	+2.0	-6.8	-2.2
Light and power	+3.4	+4.0	+11.5	+14.1
Printing and publishing	+1.7	+1.2	+8.5	+10.0
Laundering, cleaning, and dyeing	-2	-2.8	+4.3	+1
Chemical (including soap, glue, and explosives)	-1.3	-2.9	-5.5	-5.6
Construction:				
Building	-5.2	-2.8	-3.2	+8.9
Highway	+16.1	+16.9	+7.5	-5.8
Railroad	+1	+2	-11.6	
Marine, dredging, sewer-digging	+5.1	+15.3	+58.8	+124.2
Communication:				
Steam railways	-4.8	-4.6	-2.8	+5.1
Electric railways	+4	+1	+7.4	+6.6
Express, telephone, and telegraph	+3.6	+5.2	+7.2	+6.6
Wholesale trade	+3.5	+3.8	-4.4	-6.6
Hotels and restaurants	-3	-	-1.7	
<i>Nonmanual</i>				
Manufacturing, mines, and quarries	+1	+1.5	+3.1	+6.8
Construction	-2.0	-9.0	+3.4	+10.9
Communication	+3	+1.4	-1.5	+1.4
Wholesale trade	-4	+8.1	-3.4	+5.1
Retail trade, sales force only	-4.4	-6.2	+13.7	+34.7
Miscellaneous professional services	+1.6	+1.4	+12.6	+14.6
Hotels and restaurants	+7.2	-	+3.7	

WHOLESALE AND RETAIL PRICES

Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices¹ received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food on October 15, 1926, and September 15 and October 15, 1927, as well as the percentage changes in the year and in the month. For example, the retail price per pound of canned red salmon was 35.6 cents in October, 1926; 33.9 cents in September, 1927; and 34.4 cents in October, 1927. These figures show a decrease of 3 per cent in the year and an increase of 1 per cent in the month.

The cost of the various articles of food combined shows a decrease of 2.4 per cent on October 15, 1927, as compared with October 15, 1926, and an increase of 1.4 per cent on October 15, 1927, as compared with September 15, 1927.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE OCTOBER 15, 1927, COMPARED WITH SEPTEMBER 15, 1927, AND OCTOBER 15, 1926

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (-) Oct. 15, 1927, compared with—	
		Oct. 15, 1926	Sept. 15, 1927	Oct. 15, 1927	Oct. 15, 1926	Sept. 15, 1927
Sirloin steak	Pound	Cents	Cents	Cents		
Round steak	do	41.5	43.8	43.7	+5	-0.2
Rib roast	do	36.0	38.1	37.9	+5	-1
Chuck roast	do	30.6	31.8	31.9	+4	+0.3
Plate beef	do	22.8	24.0	24.3	+7	+1
Pork chops	do	14.6	15.5	15.8	+8	+2
Bacon	do	42.6	40.7	41.5	-3	+2
Ham	do	51.7	46.5	46.6	-10	+0.2
Lamb, leg of	do	59.8	53.8	53.6	-10	-0.4
Hens	do	38.3	38.5	38.2	-0.3	-1
Salmon, canned, red	do	37.6	35.4	35.7	-5	+1
Milk, fresh	Quart	35.6	33.9	34.4	-3	+1
Milk, evaporated	15-16 ounce can	14.0	14.1	14.2	+1	+1
Butter	Pound	11.4	11.6	11.5	+1	-1
Oleomargarine (all butter substitutes)	do	54.3	53.4	55.7	+3	+4
Cheese	do	30.3	27.8	27.9	-8	+0.4
Lard	do	36.7	37.7	38.3	+4	+2
Vegetable lard substitute	do	21.9	19.2	19.6	-11	+2
Eggs, strictly fresh	Dozen	25.7	25.1	25.1	-2	0
Eggs, storage	do	58.2	48.7	56.6	-3	+16
		45.9	42.1	42.1	-8	0

¹ In addition to retail prices of food and coal, the bureau publishes the prices of gas and electricity from each of 51 cities for the dates for which these data are secured.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE OCTOBER 15, 1927, COMPARED WITH SEPTEMBER 15, 1927, AND OCTOBER 15, 1926—Continued

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (-) Oct. 15, 1927, compared with—	
		Oct. 15, 1926	Sept. 15, 1927	Oct. 15, 1927	Oct. 15, 1926	Sept. 15, 1927
Bread	Pound	Cents	Cents	Cents		
Flour	do	9.4	9.3	9.3	-1	0
Corn meal	do	5.7	5.5	5.5	-4	0
Rolled oats	do	5.1	5.3	5.2	+2	-2
Corn flakes	8-ounce pkg.	9.1	9.0	9.0	-1	0
		10.9	9.7	9.7	-11	0
Wheat cereal	28-ounce pkg.	25.4	25.5	25.5	+0.4	0
Macaroni	Pound	20.1	20.1	20.1	0	0
Rice	do	11.6	10.6	10.5	-9	-1
Beans, navy	do	9.1	9.6	9.6	+5	0
Potatoes	do	3.8	3.2	3.0	-21	-6
Onions	do	5.0	5.5	5.0	0	-9
Cabbage	do	4.0	4.1	3.9	-3	-5
Beans, baked	No. 2 can	11.7	11.4	11.5	-2	+1
Corn, canned	do	16.3	15.6	15.7	-4	+1
Peas, canned	do	17.4	16.7	16.7	-4	0
Tomatoes, canned	do	12.1	11.9	11.9	-2	0
Sugar	Pound	7.1	7.2	7.2	+1	0
Tea	do	77.3	77.2	77.5	+0.3	+0.4
Coffee	do	50.9	47.3	47.4	-7	+0.2
Prunes	do	16.9	15.2	14.6	-14	-4
Raisins	do	14.8	14.3	14.2	-4	-1
Bananas	Dozen	34.9	33.5	33.9	-3	+1
Oranges	do	56.0	55.3	57.8	+3	+5
Weighted food index					-2.4	+1.4

Table 2 shows for the United States average retail prices of specified food articles on October 15, 1913, and on October 15 of each year from 1921 to 1927, together with percentage changes in October of each of these specified years, compared with October, 1913. For example, the retail price per pound of corn meal was 3.1 cents in October, 1913; 4.3 cents in October, 1921; 3.9 cents in October, 1922; 4.3 cents in October, 1923; 5.0 cents in October, 1924; 5.3 cents in October, 1925; 5.1 cents in October, 1926; and 5.2 cents in October, 1927.

As compared with October, 1913, these figures show increases of 39 per cent in October, 1921; 26 per cent in October, 1922; 39 per cent in October, 1923; 61 per cent in October, 1924; 71 per cent in October, 1925; 65 per cent in October, 1926; and 68 per cent in October, 1927.

The cost of the various articles of food combined showed an increase of 50.3 per cent in October, 1927, as compared with October, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE OCTOBER 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH OCTOBER 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on Oct. 15—								Per cent of increase Oct. 15 of each specified year com- pared with Oct. 15, 1913							
		1913	1921	1922	1923	1924	1925	1926	1927	1921	1922	1923	1924	1925	1926	1927	
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.								
Sirloin steak	Pound	25.7	37.4	38.3	40.1	39.6	41.2	41.5	43.7	46	49	56	54	60	61	70	
Round steak	do	23.1	32.9	33.1	34.4	33.7	35.4	36.0	37.9	42	43	49	46	53	56	64	
Rib roast	do	20.0	27.6	28.0	28.9	28.6	30.0	30.6	31.9	38	40	45	43	50	53	60	
Chuck roast	do	16.4	19.9	19.9	20.8	20.7	22.0	22.8	24.3	21	21	27	26	34	39	48	
Plate beef	do	12.3	13.2	12.8	13.1	13.1	14.1	14.6	15.8	7	4	7	7	15	19	23	
Pork chops	do	22.6	36.0	36.6	34.2	37.5	39.1	42.6	41.5	59	62	51	66	73	88	84	
Bacon	do	27.8	41.2	40.8	39.3	40.1	49.6	51.7	46.6	48	47	41	44	78	86	68	
Ham	do	27.6	48.3	47.6	46.4	47.1	54.3	59.8	53.6	75	72	68	71	97	117	94	
Lamb, leg of	do	18.4	30.0	35.9	36.5	35.9	38.4	38.3	38.2	63	95	98	95	109	108	108	
Hens	do	21.2	37.2	34.8	34.8	35.1	36.5	37.6	35.7	75	64	64	66	72	77	68	
Salmon, canned, red	do	34.9	31.6	31.4	31.4	31.5	35.5	35.5	34.4								
Milk, fresh	Quart	9.0	14.2	13.3	14.1	13.9	14.3	14.0	14.2	58	48	57	54	59	56	58	
Milk, evaporated	(¹)	13.4	11.2	12.2	11.0	11.5	11.1	11.5	11.5								
Butter	Pound	38.2	53.2	50.8	56.6	24.7	47.9	59.4	54.5	35.5	39	33	47	25	55	42	46
Oleomargarine (all butter substitutes).	do	29.2	27.4	28.7	30.0	30.9	30.3	32.7	29.0								
Cheese	do	22.4	32.9	34.1	38.5	34.8	37.2	36.7	38.3	47	52	72	55	66	64	71	
Lard	do	16.0	17.2	17.5	18.6	21.4	24.1	21.9	19.6	8	9	16	34	51	37	23	
Vegetable lard substitute	do	21.5	23.2	22.3	25.5	25.5	25.9	25.7	25.1								
Eggs, strictly fresh	Dozen	41.6	58.9	54.3	54.6	59.7	60.3	58.2	56.6	42	31	31	44	45	112	36	
Eggs, storage	do	44.1	39.1	41.7	44.1	46.0	45.9	42.1									
Bread	Pound	5.6	9.5	8.7	8.7	8.8	9.4	9.4	9.3	70	55	55	57	68	68	66	
Flour	do	3.3	5.4	4.8	4.6	5.3	5.9	5.7	5.5	64	45	39	61	79	73	67	
Corn meal	do	3.1	4.3	3.9	4.3	5.0	5.3	5.1	5.2	39	26	39	61	71	65	68	
Rolled oats	do	9.8	8.7	8.8	8.9	9.2	9.1	9.0									
Corn flakes	(²)	12.0	9.7	9.7	10.5	11.0	10.9	9.9	7.7								
Wheat cereal	(³)	29.7	25.6	24.4	24.4	25.1	25.4	25.5	25.5								
Macaroni	Pound	20.5	19.9	19.7	19.5	20.5	20.1	20.1									
Rice	do	8.7	9.3	9.6	9.6	10.4	11.3	11.6	10.5	7	10	10	20	30	33	21	
Beans, navy	do	8.2	10.1	10.6	10.1	10.0	9.1	9.6									
Potatoes	do	1.8	3.5	2.2	2.9	2.4	3.7	3.8	3.0	94	22	61	33	106	111	67	
Onions	do	6.5	4.4	6.3	5.2	5.8	5.0	5.0									
Cabbage	do	4.8	3.5	4.2	3.9	4.2	4.0	3.9									
Beans, baked	(⁴)	14.0	13.2	12.9	12.6	12.3	11.7	11.5									
Corn, canned	(⁵)	16.1	15.3	15.5	16.3	17.4	16.3	15.7									
Peas, canned	(⁵)	17.9	17.4	17.6	18.2	18.2	17.4	16.7									
Tomatoes, canned	(⁵)	12.9	12.7	12.9	13.5	13.1	12.1	11.9									
Sugar, granulated	Pound	5.5	6.9	7.9	10.6	8.8	6.8	7.1	7.2	25	44	93	60	24	29	31	
Tea	do	54.5	69.1	68.2	70.0	71.8	75.8	77.3	77.5	27	25	28	32	39	42	42	
Coffee	do	29.7	35.6	36.3	37.8	46.1	51.1	50.9	47.4	20	22	27	55	72	71	60	
Prunes	do	19.1	20.6	18.3	17.3	17.2	16.9	16.4	6								
Raisins	do	27.3	20.7	16.8	15.0	14.3	14.8	14.2									
Bananas	Dozen	38.5	35.6	38.3	36.1	35.1	34.9	33.9									
Oranges	do	56.6	61.1	51.1	50.6	64.6	56.0	57.8									
Weighted food index									46.9	37.2	44.2	43.2	55.5	54.1	50.3		

¹ 15-16 ounce can.

² 8-ounce package.

³ 28-ounce package.

⁴ No. 2 can.

⁵ Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows the changes in the retail prices of each of 22 articles of food for which prices have been secured since 1913, as well as the changes in the amounts of these articles that could be purchased for \$1 in specified years, 1913 to 1926, and in September and October, 1927.

TABLE 3.—AVERAGE RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD AND AMOUNT PURCHASABLE FOR \$1 IN EACH YEAR, 1913 TO 1926, AND IN SEPTEMBER AND OCTOBER, 1927

Year	Sirloin steak		Round steak		Rib roast		Chuck roast		Plate beef		Pork chops	
	Average retail price	Amt. for \$1										
1913	Cents per lb.	Lbs.										
1913	25.4	3.9	22.3	4.5	19.8	5.1	16.0	6.3	12.1	8.3	21.0	4.8
1920	43.7	2.3	39.5	2.5	33.2	3.0	26.2	3.8	18.3	5.5	42.3	2.4
1921	38.8	2.6	34.4	2.9	29.1	3.4	21.2	4.7	14.3	7.0	31.9	2.9
1922	37.4	2.7	32.3	3.1	27.6	3.6	19.7	5.1	12.8	7.8	33.0	3.0
1923	39.1	2.6	33.5	3.0	28.4	3.5	20.2	5.0	12.9	7.8	30.4	3.3
1924	39.6	2.5	33.8	3.0	28.8	3.5	20.8	4.8	13.2	7.6	30.8	3.2
1925	40.6	2.5	34.7	2.9	29.6	3.4	21.6	4.6	13.8	7.2	36.6	2.7
1926	41.3	2.4	35.6	2.8	30.3	3.3	22.5	4.4	14.6	6.8	39.5	2.5
1927:												
September	43.8	2.3	38.1	2.6	31.8	3.2	24.0	4.2	15.5	6.5	40.7	2.5
October	43.7	2.3	37.9	2.6	31.9	3.1	24.3	4.1	15.8	6.3	41.5	2.4
	Bacon		Ham		Hens		Milk		Butter		Cheese	
1913	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per qt.	Qts.	Cents per lb.	Lbs.	Cents per lb.	Lbs.
1913	27.0	3.7	26.9	3.7	21.3	4.7	8.9	11.2	38.3	2.6	22.1	4.5
1920	52.3	1.9	55.5	1.8	44.7	2.2	16.7	6.0	70.1	1.4	41.6	2.4
1921	42.7	2.3	48.8	2.0	39.7	2.5	14.6	6.8	51.7	1.9	34.0	2.9
1922	39.8	2.5	48.8	2.0	36.0	2.8	13.1	7.6	47.9	2.1	32.9	3.0
1923	39.1	2.6	45.5	2.2	35.0	2.9	13.8	7.2	55.4	1.8	36.9	2.7
1924	37.7	2.7	45.3	2.2	35.3	2.8	13.8	7.2	51.7	1.9	35.3	2.8
1925	46.7	2.1	52.6	1.9	36.6	2.7	14.0	7.1	54.8	1.8	36.7	2.7
1926	50.3	2.0	57.4	1.7	38.8	2.6	14.0	7.1	53.1	1.9	36.6	2.7
1927:												
September	46.5	2.2	53.8	1.9	35.4	2.8	14.1	7.1	53.4	1.9	37.7	2.7
October	46.6	2.1	53.6	1.9	35.7	2.8	14.2	7.0	55.7	1.8	38.3	2.6
	Lard		Eggs		Bread		Flour		Corn meal		Rice	
1913	Cents per lb.	Lbs.	Cents per doz.	Doz.	Cents per lb.	Lbs.						
1913	15.8	6.3	34.5	2.9	5.6	17.9	3.3	30.3	3.0	33.3	8.7	11.5
1920	29.5	3.4	68.1	1.5	11.5	8.7	8.1	12.3	6.5	15.4	17.4	5.7
1921	18.0	5.6	50.9	2.0	9.9	10.1	5.8	17.2	4.5	22.2	9.5	10.5
1922	17.0	5.9	44.4	2.3	8.7	11.5	5.1	19.6	3.9	25.6	9.5	10.5
1923	17.7	5.6	46.5	2.2	8.7	11.5	4.7	21.3	4.1	24.4	9.5	10.5
1924	19.0	5.3	47.8	2.1	8.8	11.4	4.9	20.4	4.7	21.3	10.1	9.9
1925	23.3	4.3	52.1	1.9	9.4	10.6	6.1	16.4	5.4	18.5	11.1	9.0
1926	21.9	4.6	48.5	2.1	9.4	10.6	6.0	16.7	5.1	19.6	11.6	8.6
1927:												
September	19.2	5.2	48.7	2.1	9.3	10.8	5.5	18.2	5.3	18.9	10.6	9.4
October	19.6	5.1	56.6	1.8	9.3	10.8	5.5	18.2	5.2	19.2	10.5	9.5
	Potatoes		Sugar		Tea		Coffee					
1913	Cents per lb.	Lbs.										
1913	1.7	58.8	5.5	18.2	54.4	1.8	29.8	3.4				
1920	6.3	15.9	19.4	5.2	73.3	1.4	47.0	2.1				
1921	3.1	32.3	8.0	12.5	69.7	1.4	36.3	2.8				
1922	2.8	35.7	7.3	13.7	68.1	1.5	36.1	2.8				
1923	2.9	34.5	10.1	9.9	69.5	1.4	37.7	2.7				
1924	2.7	37.0	9.2	10.9	71.5	1.4	43.3	2.3				
1925	3.6	27.8	7.2	13.9	75.5	1.3	51.5	1.9				
1926	4.9	20.4	6.9	14.5	76.7	1.3	51.0	2.0				
1927:												
September	3.2	31.3	7.2	13.9	77.2	1.3	47.3	2.1				
October	3.0	33.3	7.2	13.9	77.5	1.3	47.4	2.1				

Index Numbers of Retail Prices of Foods in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years, from 1913 to 1926,² and by months for 1926, and for January through October, 1927. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1926 was 162.6, which means that the average money price for the year 1926 was 62.6 per cent higher than the average money price for the year 1913. As compared with the relative price, 159.8 in 1925, the figures for 1926 show an increase of nearly 3 points, but an increase of 1.75 per cent in the year.

In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100.0 are 154.0 for September and 156.1 for October, 1927.

The curve shown in the chart on page 177 pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

² For index numbers of each month, January, 1913, to December, 1925, see Bulletin No. 396, pp. 44 to 61, and Bulletin No. 418, pp. 38 to 51.

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD, BY YEARS, 1913 AND 1920 TO 1926, AND BY MONTHS FOR 1926, AND JANUARY THROUGH OCTOBER, 1927

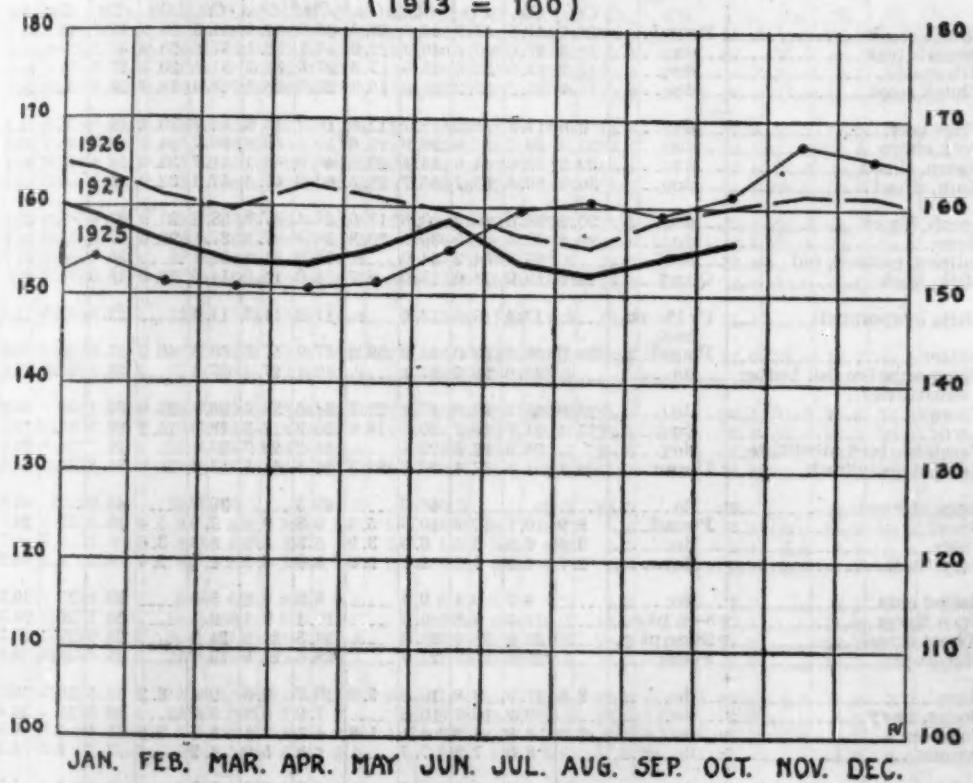
[Average for year 1913 = 100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	170.1	164.3	155.1	144.7	167.0
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	166.0	165.7	155.1	135.0	159.7
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926	162.6	159.6	140.6	120.7	178.0	186.3	213.3	182.2	157.3	135.6	135.6	165.6
1926: January	160.6	157.0	151.5	138.1	119.8	173.8	178.5	198.1	181.2	159.6	144.6	170.1
February	159.8	156.1	148.0	138.1	120.7	172.9	181.1	199.3	182.6	159.6	142.3	169.7
March	160.2	156.5	151.0	138.1	120.7	177.1	179.3	200.7	185.0	157.3	139.9	168.3
April	161.8	157.8	152.5	139.4	121.5	182.4	179.6	202.6	190.1	156.2	132.9	165.2
May	163.4	160.5	153.5	140.6	120.7	191.9	182.6	207.8	192.5	156.2	130.5	162.9
June	165.4	162.3	154.5	141.9	120.7	200.0	190.7	221.9	188.7	155.1	131.3	161.5
July	165.4	162.8	155.1	141.9	119.8	198.6	193.7	226.4	184.0	155.1	130.8	161.1
August	164.6	162.3	153.5	140.6	118.2	192.9	192.6	225.7	177.9	156.2	132.1	161.5
September	165.0	163.2	154.5	141.9	119.8	202.4	192.2	224.5	177.5	157.3	137.1	163.3
October	163.4	161.4	154.5	142.5	120.7	202.9	191.5	222.3	176.5	157.3	141.8	166.1
November	161.0	159.2	152.5	141.9	121.5	187.1	188.9	217.1	174.2	158.4	145.4	167.0
December	160.2	158.3	152.5	141.9	123.1	177.1	183.7	212.3	174.6	159.6	154.8	169.2
1927: January	160.6	158.3	153.0	141.9	124.0	174.3	181.1	211.2	180.8	158.4	152.5	170.1
February	161.0	158.7	153.5	141.9	123.1	171.0	179.6	210.8	180.8	158.4	153.5	170.1
March	161.8	159.6	153.5	142.5	123.1	174.3	179.3	210.0	181.7	158.4	154.6	168.8
April	164.6	163.2	156.1	145.6	125.6	175.7	178.2	210.8	182.6	157.3	152.5	167.9
May	166.5	165.5	157.6	146.9	125.6	173.3	176.3	209.3	180.3	156.2	139.4	167.4
June	166.9	165.9	157.1	146.9	125.6	165.2	174.4	206.3	170.4	156.2	135.2	167.4
July	171.7	170.0	160.1	149.4	126.4	166.2	172.6	203.0	167.1	157.3	134.2	167.0
August	172.0	170.9	160.1	149.4	126.4	179.5	172.2	201.9	166.2	158.4	134.2	167.4
September	172.4	170.9	160.6	150.0	128.1	193.8	172.2	200.0	166.2	158.4	139.4	170.6
October	172.0	170.0	161.1	151.9	130.6	197.6	172.6	199.3	167.6	159.6	145.4	173.3
Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Pota-toes	Sugar	Tea	Coffee	All articles ¹	
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
1920	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4	
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3	
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6	
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2	
1924	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9	
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4	
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6	
1926: January	141.1	156.2	167.9	187.9	173.3	133.3	341.3	121.8	139.9	172.1	164.3	
February	140.5	127.0	167.9	190.9	173.3	133.3	335.3	121.8	139.9	172.1	161.5	
March	138.6	111.6	167.9	187.9	173.3	134.5	329.4	121.8	139.9	172.1	159.9	
April	136.1	111.9	167.9	184.8	170.0	134.5	394.1	120.0	140.3	171.5	162.4	
May	136.1	112.8	167.9	184.8	170.0	134.5	352.9	121.8	140.4	171.1	161.1	
June	143.0	118.0	167.9	184.8	170.0	134.5	294.1	125.5	141.4	171.1	159.7	
July	144.9	122.0	167.9	181.8	170.0	134.5	241.2	125.5	141.5	171.5	157.0	
August	143.7	130.1	167.9	181.8	170.0	133.3	211.8	127.3	141.7	171.1	155.7	
September	141.1	149.3	167.9	175.8	170.0	134.5	229.4	127.3	141.5	171.1	158.5	
October	138.6	168.7	167.9	172.7	170.0	133.3	223.5	129.1	142.1	170.8	160.0	
November	133.5	191.3	167.9	172.7	170.0	129.9	235.3	129.1	141.7	170.5	161.6	
December	129.1	189.0	167.9	169.7	170.0	128.7	235.3	132.7	141.4	170.1	161.8	
1927: January	126.6	162.0	167.9	169.7	170.0	126.4	235.3	136.4	142.5	168.5	159.3	
February	124.1	128.1	167.9	169.7	170.0	124.1	223.5	136.4	142.3	167.4	156.0	
March	122.8	102.6	167.9	166.7	170.0	124.1	217.6	134.5	142.6	165.4	153.8	
April	120.9	98.3	167.9	166.7	170.0	123.0	217.6	132.7	142.6	163.8	153.6	
May	120.3	97.4	167.9	166.7	170.0	121.8	264.7	132.7	142.3	161.7	155.4	
June	119.0	97.1	166.1	166.7	173.3	123.0	352.9	132.7	142.1	160.7	158.5	
July	119.0	107.0	166.1	166.7	173.3	123.0	247.1	134.5	142.5	159.7	153.4	
August	119.6	121.7	166.1	169.7	173.3	123.0	200.0	132.7	142.6	159.1	152.4	
September	121.5	141.2	166.1	166.7	176.7	121.8	188.2	130.9	141.9	158.7	154.0	
October	124.1	164.1	166.1	166.7	173.3	120.7	176.5	130.9	142.5	159.1	156.1	

¹ 22 articles in 1913-1920; 43 articles in 1921-1927.

TREND OF RETAIL PRICES OF FOOD.

(1913 = 100)



Retail Prices of Food in 51

AVERAGE retail food prices are shown in Table 5 for 40 cities 1927. For 11 other cities prices are shown for the same dates by the bureau until after 1913.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL
[Exact comparisons of prices in different cities can not be made for some articles]

Article	Unit	Atlanta, Ga.				Baltimore, Md.				Birmingham, Ala.			
		Oct. 15—		Sept. 15, 1926	Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Sept. 15, 1926	Oct. 15, 1927
		1913	1926			1913	1926			1913	1926		
Sirloin steak	Pound	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Round steak	do	24.2	41.5	43.9	44.6	23.5	38.8	41.4	41.3	28.5	40.7	42.1	42.5
Rib roast	do	21.3	37.6	40.1	40.3	22.0	36.1	38.1	37.6	23.0	35.8	36.6	37.0
Chuck roast	do	19.7	33.3	32.8	33.3	17.3	29.9	31.2	31.5	20.5	27.8	29.8	30.2
Plate beef	do	15.4	25.2	25.2	25.2	15.3	22.0	23.1	23.4	16.5	23.3	24.0	23.3
Pork chops	do	9.6	13.3	15.2	15.7	12.6	15.2	15.6	16.3	10.4	14.8	14.2	15.3
Bacon, sliced	do	25.0	39.2	37.9	38.9	19.6	39.9	39.4	40.7	24.6	40.3	36.9	38.2
Ham, sliced	do	32.2	50.0	44.0	45.4	22.5	46.9	42.1	41.7	35.0	50.4	47.0	46.4
Lamb, leg of	do	30.8	60.8	55.7	55.7	28.5	60.9	56.5	57.1	32.0	59.3	55.3	55.3
Hens	do	20.2	38.6	40.2	40.8	18.0	38.4	37.8	38.2	21.9	37.9	41.6	42.6
Salmon, canned, red	do	20.8	38.5	34.5	36.5	20.8	38.3	37.2	37.6	20.0	37.6	31.6	34.2
Milk, fresh	Quart	33.6	34.2	34.0	34.2	34.2	31.4	32.1	32.1	36.4	34.2	34.2	34.7
Milk, evaporated	15-16 oz. can.	10.6	19.0	18.0	18.0	8.7	14.0	14.0	14.0	10.0	18.0	16.7	16.7
Butter	Pound	39.0	56.5	53.6	55.9	38.8	57.9	57.3	60.3	40.0	57.0	56.2	58.0
Oleomargarine (all butter substitutes)	do	32.6	26.2	27.1	—	30.1	27.1	27.4	—	36.3	32.5	32.6	—
Cheese	do	25.0	35.5	36.8	37.1	23.3	34.6	36.4	36.8	23.0	37.1	36.7	39.2
Lard	do	15.4	21.7	19.7	20.5	14.8	20.3	17.9	18.6	15.2	22.5	18.9	19.8
Vegetable lard substitute	do	24.3	22.3	22.5	—	24.2	22.7	23.1	—	21.7	21.8	22.2	—
Eggs, strictly fresh	Dozen	34.1	51.5	47.4	54.3	36.3	54.8	43.3	53.3	35.0	51.8	42.9	48.1
Eggs, storage	do	—	—	—	45.0	—	43.3	—	39.7	—	45.0	—	40.0
Bread	Pound	5.9	10.7	10.8	10.8	5.5	9.8	9.9	9.9	5.4	10.3	10.3	10.3
Flour	do	3.5	6.6	6.5	6.5	3.2	5.3	5.2	5.3	3.6	6.8	6.7	6.7
Corn meal	do	2.7	4.8	4.1	4.1	2.6	3.9	4.2	4.2	2.4	4.2	4.2	4.2
Rolled oats	do	—	—	—	9.7	9.4	9.4	—	8.3	8.2	8.3	—	10.1
Corn flakes	8-oz. pkg.	11.5	9.8	9.8	—	—	10.1	9.1	9.1	—	12.1	10.6	10.5
Wheat cereal	28-oz. pkg.	25.6	26.4	26.6	—	24.3	24.2	24.5	—	—	26.9	27.7	27.7
Macaroni	Pound	21.7	21.7	21.7	—	18.6	18.9	19.4	—	—	18.8	18.8	18.8
Rice	do	8.6	11.9	9.8	10.0	9.0	10.7	9.6	9.5	8.2	11.5	10.3	10.7
Beans, navy	do	10.2	10.7	10.5	—	—	7.9	8.5	8.7	—	10.5	10.2	10.4
Potatoes	do	2.3	4.9	4.2	4.1	1.8	4.1	3.1	3.1	2.2	5.4	4.8	4.7
Onions	do	—	—	—	8.0	7.8	7.3	—	4.8	5.0	4.2	—	7.7
Cabbage	do	—	—	—	4.8	4.9	5.0	—	4.0	3.5	3.8	—	5.4
Beans, baked	No. 2 can	11.7	11.3	11.4	—	—	10.4	10.4	10.8	—	12.0	11.3	11.8
Corn, canned	do	17.8	18.2	18.2	—	—	15.0	14.4	14.7	—	18.5	16.0	16.8
Peas, canned	do	20.2	20.1	19.7	—	—	15.4	14.8	15.0	—	21.6	20.2	21.0
Tomatoes, canned	do	—	—	—	10.9	11.5	11.1	—	10.7	10.3	10.5	—	11.4
Sugar, granulated	Pound	5.8	7.4	7.7	7.7	4.9	6.5	6.4	6.4	5.7	7.5	7.8	7.7
Tea	do	60.0	104.3	102.6	103.3	56.0	74.2	73.6	73.4	61.3	96.3	96.0	98.5
Coffee	do	32.0	51.8	48.5	48.2	24.4	47.6	42.7	43.0	28.8	54.3	51.4	51.2
Prunes	do	—	—	—	17.9	16.4	14.9	—	14.2	13.0	12.4	—	19.3
Raisins	do	—	—	—	18.3	16.3	15.9	—	13.5	12.9	13.0	—	15.7
Bananas	Dozen	—	—	—	28.2	29.0	29.0	—	26.3	23.6	25.8	—	37.9
Oranges	do	—	—	—	53.8	53.1	53.2	—	57.8	56.1	57.7	—	52.3

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

CITIES ON SPECIFIED DATES

for October 15, 1913 and 1926, and for September 15 and October 15, with the exception of October, 1913, as these cities were not scheduled

ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES

[des, particularly meats and vegetables, owing to differences in trade practices]

Boston, Mass.				Bridgeport, Conn.			Buffalo, N. Y.				Butte, Mont.				Charleston, S. C.			
Oct. 15—		Sept. 15, 1926	Oct. 15, 1927	Oct. 15, 1926	Sept. 15, 1927	Oct. 15, 1927	Oct. 15—	Sept. 15, 1927	Oct. 15, 1927	Oct. 15, 1926	Sept. 15, 1927	Oct. 15, 1927	Oct. 15—	Sept. 15, 1927	Oct. 15, 1926	Oct. 15, 1927		
1913	1926	1927	1927	1926	1927	1927	1913	1926	1927	1926	1927	1927	1913	1926	1927	1927		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	
135.0	165.3	171.6	171.7	48.9	54.1	54.0	22.3	40.9	44.0	43.6	30.8	32.8	33.2	21.8	33.3	33.3	32.3	
35.0	51.7	56.5	55.9	42.4	47.0	47.5	19.3	34.6	37.4	37.2	27.4	29.1	28.0	20.4	30.0	31.0	30.0	
25.6	38.9	40.9	40.6	36.7	40.2	41.0	16.5	30.6	31.9	32.3	26.7	28.7	28.2	20.0	25.7	26.7	26.7	
15.0	28.2	30.5	30.4	27.2	30.9	31.3	15.0	23.7	25.2	25.4	19.2	20.2	20.3	15.0	19.1	20.8	20.8	
18.4	20.5	20.6	11.7	12.5	12.9	11.5	14.4	15.0	15.0	12.1	13.4	13.2	12.1	14.0	14.9	14.5	14.5	
24.4	46.7	44.8	47.3	46.3	43.6	44.8	21.0	45.2	45.9	46.1	42.2	38.0	37.5	26.0	38.8	34.7	34.0	
25.4	48.6	45.5	45.8	55.3	50.3	50.7	22.3	47.0	42.0	42.7	59.3	54.6	52.5	28.6	45.4	40.4	40.2	
31.3	65.6	58.8	59.1	65.4	57.7	57.7	26.7	59.3	52.4	50.5	61.3	58.8	57.5	28.8	56.8	49.7	48.4	
20.5	39.5	39.8	38.7	38.5	39.6	38.9	15.3	34.0	33.9	33.2	37.7	37.0	37.1	22.5	41.9	39.8	39.4	
25.6	41.5	39.0	39.9	40.6	39.8	40.2	21.0	38.3	36.1	37.1	34.5	33.2	32.9	21.0	39.4	35.7	35.5	
34.9	33.2	33.6	34.1	31.9	32.8	—	—	34.5	31.8	32.6	32.5	31.4	31.2	—	30.4	31.8	32.6	
8.9	14.9	15.5	15.5	16.0	16.0	8.0	13.0	13.0	13.0	14.3	14.0	14.0	12.0	18.0	19.0	19.0		
12.0	12.1	12.1	11.6	11.6	11.6	—	11.2	11.3	11.3	10.9	11.1	11.1	—	11.9	11.8	11.8		
33.0	53.7	54.3	56.4	54.2	54.3	56.1	37.1	54.9	54.1	56.5	50.7	52.0	51.9	38.2	52.3	49.5	50.8	
29.9	28.1	27.3	30.1	27.8	27.8	—	29.3	27.8	27.2	—	—	—	—	31.2	29.2	29.2		
23.1	37.6	38.9	39.2	39.5	40.9	40.9	21.5	37.2	38.7	38.9	35.7	36.1	36.5	21.0	33.9	34.4	35.6	
15.7	21.3	19.5	19.9	21.0	18.9	19.1	14.4	20.9	18.3	19.1	25.3	23.4	23.6	15.3	22.1	20.6	19.7	
24.7	25.4	25.3	25.7	25.3	25.4	—	26.4	25.8	25.9	29.3	30.4	30.5	—	23.8	21.6	21.7		
33.3	76.7	68.4	79.8	78.9	66.6	77.9	36.6	60.5	51.1	58.8	61.1	50.6	54.8	35.0	56.7	48.2	56.7	
52.4	—	50.3	50.1	—	44.8	—	43.8	—	42.9	45.0	—	39.4	—	43.9	—	30.4		
6.0	9.1	8.5	8.5	8.8	8.8	8.5	5.6	8.8	8.7	8.7	9.8	9.8	9.8	5.9	10.2	10.9	10.9	
3.6	6.2	6.1	6.0	5.9	5.7	5.7	3.0	5.1	5.0	4.8	5.7	5.4	5.4	3.8	7.0	6.8	6.7	
3.5	6.2	6.7	6.7	8.0	7.8	7.8	2.5	5.2	5.2	4.7	5.9	6.0	6.1	2.6	3.9	4.0	3.9	
9.3	9.1	8.9	8.4	8.4	8.4	—	8.7	8.7	8.7	7.3	7.5	7.5	—	9.5	9.5	9.5		
10.7	9.9	10.0	10.4	9.7	9.6	—	10.2	9.0	9.5	12.2	1.07	10.5	—	11.8	10.3	9.9		
24.5	25.2	25.1	24.9	24.8	24.7	—	24.7	24.5	24.8	28.4	28.4	28.5	28.5	—	26.2	25.8	25.7	
22.3	22.4	22.4	22.7	22.7	22.7	—	21.4	21.2	21.4	19.1	19.5	19.5	—	18.5	18.7	18.7		
9.4	12.2	12.0	12.2	11.4	11.4	11.4	9.3	11.5	10.1	10.3	12.3	11.0	11.0	5.6	9.0	7.2	7.1	
9.6	10.3	10.4	9.6	9.6	9.5	—	8.8	9.0	9.4	10.4	10.1	9.8	—	9.9	9.8	10.1		
1.7	3.5	3.2	3.0	3.5	3.0	2.8	1.7	3.5	2.6	2.7	3.0	2.1	1.5	2.2	4.1	3.6	3.4	
5.1	5.2	4.5	5.1	5.6	5.1	—	5.9	6.0	5.8	3.8	4.8	4.1	—	5.5	6.5	5.7		
5.2	5.1	4.8	4.5	4.8	4.5	—	3.2	3.6	3.3	3.8	3.9	3.3	—	4.3	4.4	4.2		
13.2	13.1	13.3	11.4	11.7	11.7	—	9.8	9.9	10.1	14.3	13.3	13.3	—	10.0	10.0	10.0		
18.5	17.7	17.9	19.6	18.1	18.5	—	16.6	15.0	15.5	16.0	14.6	14.4	—	14.9	14.8	14.7		
19.9	19.9	20.0	21.0	20.7	20.7	—	16.5	16.6	16.0	14.0	13.8	13.8	—	16.7	16.5	16.7		
12.3	11.0	11.3	13.8	13.1	13.7	—	13.4	13.0	13.2	13.7	12.8	12.8	—	10.0	9.9	9.9		
5.4	7.0	7.2	7.2	6.8	7.1	7.1	5.4	6.9	6.9	6.9	8.4	8.6	8.6	5.0	6.8	6.8	6.7	
58.6	74.7	72.9	72.9	59.9	60.9	45.0	70.1	67.1	67.9	83.3	82.8	83.1	50.0	74.9	82.4	82.4		
33.0	55.3	51.1	51.7	48.6	45.9	46.0	29.3	49.1	45.6	45.4	57.0	54.0	54.0	26.8	47.3	43.1	42.8	
16.1	15.4	14.7	16.1	15.8	15.6	—	16.5	14.4	13.6	19.0	15.0	14.9	—	15.3	13.5	12.4		
13.9	13.2	13.0	14.8	14.3	14.2	—	14.3	13.7	13.7	15.2	15.1	14.8	—	14.8	14.4	14.0		
44.4	42.9	45.0	35.0	35.0	36.5	—	42.4	41.2	41.9	14.5	11.7	12.7	—	37.8	25.6	27.0		
62.1	64.4	70.1	66.7	64.4	69.3	—	56.6	60.6	65.7	48.3	53.5	56.2	—	44.5	46.9	35.0		

¹ Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article	Unit	Chicago, Ill.				Cincinnati, Ohio				Cleveland, Ohio			
		Oct. 15—		Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927
		1913	1926			1913	1926			1913	1926		
Sirloin steak	Pound	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Round steak	do	24.8	45.6	47.2	48.0	23.3	37.7	40.2	39.5	25.4	39.4	42.4	41.8
Rib roast	do	21.6	37.6	38.3	38.7	21.0	34.1	36.1	35.8	22.9	33.4	36.3	35.7
Chuck roast	do	20.1	36.6	35.8	36.5	19.2	30.8	31.1	31.6	18.7	27.2	30.3	29.7
Plate beef	do	15.8	26.0	26.6	27.8	16.1	22.1	22.8	23.1	16.9	22.2	24.9	25.0
Pork chops	do	12.0	15.0	15.4	16.0	12.2	15.4	15.8	16.3	12.2	13.6	14.4	15.2
Bacon, sliced	do	21.0	43.0	42.6	42.5	23.7	42.1	40.3	41.2	23.0	43.7	43.5	43.6
Ham, sliced	do	32.7	56.3	50.9	51.2	26.0	46.7	40.6	40.5	28.1	51.7	45.1	44.7
Lamb, leg of	do	32.0	60.1	54.5	54.6	30.0	60.0	52.2	52.0	35.7	61.6	53.3	53.3
Hens	do	19.8	39.7	38.5	38.0	17.8	37.5	35.4	35.5	18.7	37.2	37.4	36.4
Salmon, canned, red	do	18.4	37.5	36.1	36.8	22.7	37.2	33.5	34.3	20.9	37.8	35.1	35.7
Milk, fresh	Quart	8.0	14.0	14.0	14.0	8.0	14.0	13.3	13.3	8.0	14.3	14.0	14.0
Milk, evaporated	15-16 oz.	11.3	11.2	11.3	—	10.9	11.3	11.3	—	11.3	11.4	11.4	—
Butter	Pound	35.4	53.7	52.7	54.3	37.8	53.0	51.1	54.1	39.2	58.0	57.1	58.8
Oleomargarine (all butter substitutes)	do	27.5	27.1	27.4	—	30.2	28.0	28.6	—	33.0	29.3	28.8	—
Cheese	do	25.7	42.4	42.0	42.5	21.0	36.4	37.4	39.1	24.0	36.9	38.4	39.4
Lard	do	15.0	22.2	19.4	19.8	14.2	20.0	18.1	18.4	16.4	23.2	20.6	20.9
Vegetable lard substitute	do	26.7	26.7	26.5	26.3	—	25.9	26.1	26.2	—	27.4	26.8	26.9
Eggs, strictly fresh	Dozen	33.3	57.0	46.0	53.7	32.6	52.1	45.9	56.2	42.7	64.9	52.8	60.6
Eggs, storage	do	47.0	—	43.2	—	39.3	—	39.9	—	45.8	—	42.3	—
Bread	Pound	6.1	9.8	9.9	9.9	4.8	9.2	8.9	8.7	5.6	7.9	7.7	7.7
Flour	do	2.9	5.4	5.1	5.1	3.3	6.0	5.8	5.8	3.1	5.8	5.6	5.6
Corn meal	do	2.8	6.5	6.4	6.6	2.8	3.9	4.5	4.5	3.0	5.2	5.6	5.5
Rolled oats	do	8.6	8.6	8.5	—	8.7	8.8	8.9	—	9.5	9.4	9.5	—
Corn flakes	8-oz. pkg.	10.1	9.5	9.5	—	10.4	9.4	9.4	—	11.2	9.8	9.8	—
Wheat cereal	28-oz. pkg.	25.2	25.2	25.2	—	24.4	25.1	25.1	—	25.3	25.7	25.3	—
Macaroni	Pound	19.7	19.1	18.9	—	18.5	18.3	18.5	—	22.0	21.5	21.5	—
Rice	do	9.0	12.1	10.8	10.7	8.8	11.4	9.7	10.2	9.0	12.0	10.9	11.0
Beans, navy	do	—	9.5	9.6	9.6	—	7.8	8.7	8.8	—	7.8	8.8	8.8
Potatoes	do	1.7	3.7	3.2	2.9	1.8	4.2	3.3	3.2	1.9	4.1	3.4	3.2
Onions	do	—	5.3	5.5	4.9	—	4.6	4.7	4.7	—	4.9	5.0	4.6
Cabbage	do	—	4.5	4.0	4.3	—	4.1	4.1	3.7	—	4.5	4.6	4.1
Beans, baked	No. 2 can	12.8	12.8	12.5	—	11.0	10.6	10.5	—	12.6	13.1	12.8	—
Corn, canned	do	17.1	15.7	16.0	—	15.2	15.2	15.1	—	16.9	16.6	16.9	—
Peas, canned	do	17.5	16.6	16.1	—	17.5	16.6	17.1	—	17.5	18.2	17.9	—
Tomatoes, canned	do	13.9	13.9	14.1	—	11.8	11.7	11.7	—	13.8	14.1	14.2	—
Sugar, granulated	Pound	5.2	6.9	7.1	7.0	5.4	7.2	7.5	7.5	5.5	7.3	7.4	7.6
Tea	do	55.0	74.5	72.0	71.3	60.0	78.1	75.5	78.4	50.0	78.6	81.8	80.0
Coffee	do	30.7	50.8	47.1	46.3	25.6	45.1	42.5	43.0	26.5	55.0	49.9	50.8
Prunes	do	18.8	17.3	16.9	—	17.2	15.2	13.7	—	16.7	15.3	14.7	—
Raisins	do	15.4	15.0	14.8	—	15.3	14.6	14.3	—	14.8	14.8	14.6	—
Bananas	Dozen	40.5	39.8	38.3	—	36.7	36.1	38.3	—	30.4	30.3	30.3	—
Oranges	do	61.3	63.0	65.6	—	56.4	52.2	57.5	—	63.6	59.8	60.8	—

¹ The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Columbus, Ohio			Dallas, Tex.			Denver, Colo.			Detroit, Mich.			Fall River, Mass.			
Oct. 15, 1926	Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Oct. 15, 1927	Oct. 15—		Oct. 15, 1927	Oct. 15—		Oct. 15, 1927	Oct. 15—		Oct. 15, 1927	
			1913	1926		1913	1926		1913	1926		1913	1926		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	
40.6	41.9	41.6	23.3	36.2	36.9	37.9	23.9	33.6	35.5	34.9	25.4	42.0	44.8	44.4	
35.9	37.6	37.5	21.3	32.9	34.2	35.0	21.4	30.2	32.0	30.0	20.8	34.5	37.6	37.3	
30.9	32.3	32.3	20.1	27.8	27.9	27.9	17.8	24.0	25.3	24.8	20.0	30.1	32.8	32.8	
24.8	26.5	26.4	16.9	23.1	23.9	23.5	15.8	19.5	20.7	20.3	15.4	22.9	25.1	25.4	
15.4	16.8	16.8	13.6	17.8	18.5	18.5	10.0	11.1	12.2	12.4	11.0	14.3	15.3	15.2	
39.7	37.7	40.3	22.5	38.3	37.4	39.1	20.8	40.6	37.4	38.2	21.6	45.7	44.8	44.5	
53.3	48.2	48.8	38.3	46.1	47.0	47.9	28.0	53.3	47.3	46.3	23.5	54.7	48.5	47.9	
58.8	51.8	52.5	32.5	62.8	56.2	54.8	31.7	60.8	51.6	51.5	27.0	64.6	55.8	56.0	
41.7	44.2	42.5	23.3	43.6	43.4	44.1	14.6	35.8	36.8	36.2	16.4	39.9	38.9	39.1	
37.7	35.4	36.1	19.3	32.3	30.7	31.7	19.4	29.8	29.8	28.1	19.8	39.2	36.2	36.5	
36.8	35.9	36.6	—	39.0	37.2	37.9	—	34.5	34.5	35.8	—	35.7	35.0	35.5	
12.0	12.0	12.0	11.6	12.0	13.0	13.0	8.4	12.0	12.0	12.0	9.0	14.0	14.0	9.0	
11.4	11.6	11.6	—	13.0	13.1	13.2	—	10.7	10.7	10.6	—	11.2	11.4	11.3	
53.6	53.4	55.1	42.5	53.0	52.1	55.4	39.0	49.0	48.3	50.9	37.0	54.9	55.3	56.8	
29.9	28.0	28.1	—	33.9	30.6	30.3	—	29.0	24.6	24.6	—	28.9	26.8	27.8	
35.9	36.9	37.3	20.0	36.1	38.9	38.3	26.1	37.4	37.9	39.0	21.7	38.1	39.4	40.3	
19.6	16.7	17.3	16.8	25.6	23.3	23.9	16.1	22.6	19.1	19.8	16.5	22.1	19.4	19.5	
26.2	26.2	26.2	—	24.0	23.4	23.5	—	24.3	22.4	22.2	—	27.1	26.8	26.8	
49.2	40.4	45.7	—	48.0	43.0	46.2	37.1	55.6	40.7	54.6	35.6	56.9	47.8	54.3	
40.3	—	42.0	—	—	35.0	—	43.9	—	40.5	—	43.4	—	41.5	—	
8.1	7.7	7.7	5.3	9.5	9.5	5.5	8.3	8.0	8.0	5.6	8.2	8.5	8.3	9.0	
5.5	5.3	5.1	3.2	5.7	5.5	5.5	2.6	4.5	4.3	4.3	3.1	5.6	5.4	5.3	
3.6	4.1	4.1	3.3	4.4	4.5	4.6	2.6	4.0	4.4	4.4	2.8	5.9	6.0	6.1	
9.3	9.2	9.1	—	10.2	10.3	10.5	—	8.3	7.6	7.7	—	9.3	9.5	9.6	
10.8	9.8	9.5	—	11.1	10.6	10.6	—	11.1	9.8	9.7	—	10.6	9.8	9.8	
24.5	26.1	26.0	—	27.6	27.2	27.6	—	24.9	24.8	24.6	—	25.8	25.7	25.9	
20.1	21.0	21.0	—	21.6	21.5	21.7	—	19.7	19.7	19.4	—	22.4	22.1	22.3	
13.8	12.1	12.0	9.3	12.5	11.7	12.3	8.6	10.6	9.8	9.7	8.4	13.4	11.8	11.4	
7.7	8.8	8.8	—	10.1	11.2	10.9	—	9.6	10.7	10.0	—	8.6	9.1	8.9	
3.9	3.3	3.0	2.5	5.3	5.0	4.8	1.4	3.3	2.5	2.0	1.6	3.2	2.9	2.6	
4.8	6.1	4.9	—	—	6.5	7.4	6.9	—	3.7	4.8	4.3	—	4.6	4.7	4.4
4.5	4.2	4.5	—	5.4	6.1	5.8	—	2.4	2.4	2.6	—	3.9	3.5	3.4	
12.1	12.6	12.6	—	13.3	13.0	13.2	—	11.4	10.9	10.6	—	11.6	11.3	11.3	
14.4	13.9	13.9	—	17.8	18.4	18.4	—	14.8	13.9	14.0	—	16.6	16.4	16.5	
15.1	14.8	14.8	—	21.9	21.4	21.5	—	16.8	15.2	15.2	—	17.2	17.2	17.0	
12.5	13.3	12.8	—	12.5	12.6	12.5	—	12.1	11.9	12.2	—	12.4	12.7	12.7	
7.2	7.8	7.7	5.8	7.7	8.0	8.0	5.4	7.6	7.8	7.8	5.4	7.3	7.5	5.3	
89.3	88.0	89.3	66.7	104.7	107.1	107.5	52.8	69.3	68.0	70.3	43.3	75.3	74.5	74.5	
51.6	47.9	47.8	36.7	60.3	57.1	57.1	29.4	51.0	48.9	47.9	29.3	52.0	47.8	47.6	
18.5	16.6	16.0	—	21.5	21.1	18.6	—	18.3	14.8	14.9	—	19.2	16.7	16.4	
15.0	14.5	14.8	—	16.7	16.3	15.7	—	14.5	14.0	14.1	—	15.4	14.8	14.3	
38.9	38.6	38.6	—	36.3	35.0	35.0	—	31.5	30.3	31.4	—	34.8	35.0	34.8	
54.8	54.0	62.9	—	57.5	54.7	54.0	—	50.0	48.5	46.8	—	58.0	60.1	68.7	

^a Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article	Unit	Houston, Tex.			Indianapolis, Ind.			Jacksonville, Fla.				
		Oct. 15, 1926	Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927
					1913	1926			1913	1926		
Sirloin steak	Pound	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
do		33.8	34.6	35.0	26.0	39.3	41.3	41.5	25.5	37.5	35.4	35.8
Round steak	do	32.7	33.5	33.6	24.7	38.2	38.6	38.8	21.0	32.3	31.3	31.2
Rib roast	do	26.8	27.3	27.3	17.8	29.4	30.8	29.9	21.3	28.6	27.1	27.3
Chuck roast	do	20.5	21.3	22.3	16.3	24.7	25.3	25.7	14.6	20.6	20.1	20.4
Plate beef	do	17.3	18.0	18.3	12.9	15.3	16.1	15.8	11.6	12.5	12.8	13.0
Pork chops	do	39.3	35.5	36.8	22.2	42.9	40.8	41.5	24.0	39.5	33.3	34.1
Bacon, sliced	do	52.1	46.6	45.1	29.7	49.0	42.3	43.7	31.0	50.0	42.1	42.2
Ham, sliced	do	57.1	50.8	50.0	31.2	61.4	52.7	53.5	30.2	52.5	49.5	49.6
Lamb, leg of	do	35.0	34.2	32.0	20.7	41.7	39.0	37.8	21.6	39.5	38.0	38.8
Hens	do	39.9	34.6	30.6	21.0	38.7	36.6	36.4	23.8	41.0	34.0	34.2
Salmon, canned, red	do	34.1	32.6	33.8	35.8	34.0	34.2	38.0	33.9	34.6	31.3	31.2
Milk, fresh	Quart	15.6	15.6	15.6	8.0	12.0	12.0	12.0	12.3	22.3	20.3	20.3
Milk, evaporated	15-16 oz. can	11.5	11.6	11.6	10.8	10.8	10.8	10.8	12.1	11.9	11.7	11.7
Butter	Pound	54.4	49.2	53.9	36.8	54.1	52.2	54.6	39.3	55.0	53.3	55.0
Oleomargarine (all butter substitutes)	do	20.9	27.6	27.3	—	30.4	29.2	29.3	—	32.4	30.3	30.4
Cheese	do	33.2	34.4	35.3	21.3	35.0	37.7	39.0	22.5	35.2	35.7	36.6
Lard	do	22.3	21.3	20.6	15.0	19.8	17.4	17.9	15.8	22.9	21.3	21.8
Vegetable lard substitute	do	19.0	17.8	18.2	—	26.8	27.4	27.4	—	24.4	22.9	22.0
Eggs, strictly fresh	Dozen	47.4	41.5	43.1	32.2	48.1	37.3	50.6	40.0	71.0	53.1	56.7
Eggs, storage	do	40.7	—	36.0	—	40.0	—	45.0	—	49.3	—	40.7
Bread	Pound	8.8	8.5	8.5	5.1	8.1	8.1	8.1	6.2	11.0	10.9	6.0
Flour	do	5.7	5.1	5.1	3.2	5.6	5.5	5.5	3.7	6.9	6.6	6.5
Corn meal	do	4.1	4.5	4.3	2.5	4.2	4.2	4.3	2.9	4.2	4.3	4.4
Rolled oats	do	8.9	8.9	8.9	—	8.1	8.3	8.5	—	9.6	9.6	9.3
Corn flakes	8-oz. pkg	11.8	9.2	9.3	—	10.1	9.3	9.4	—	11.2	9.9	9.9
Wheat cereal	28-oz. pkg.	25.6	25.0	25.0	—	25.3	25.6	25.9	—	24.9	24.4	24.6
Macaroni	Pound	18.4	18.6	18.3	—	19.2	19.6	19.2	—	20.2	19.4	19.2
Rice	do	9.8	8.9	8.5	9.2	12.1	10.6	10.8	6.6	10.8	9.4	9.4
Beans, navy	do	9.2	10.2	10.1	—	8.1	8.7	9.1	—	9.9	9.3	9.2
Potatoes	do	4.9	4.7	4.4	1.7	3.8	3.0	2.8	2.5	4.9	4.4	3.9
Onions	do	5.4	5.9	5.2	—	5.1	6.3	5.8	—	7.3	7.2	6.0
Cabbage	do	4.8	5.5	5.3	—	4.0	4.5	4.3	—	5.5	4.6	4.2
Beans, baked	No. 2 can	11.1	11.0	10.8	—	10.4	10.3	10.3	—	11.4	10.8	10.5
Corn, canned	do	14.2	14.1	13.5	—	14.4	13.8	14.0	—	20.0	17.8	17.5
Peas, canned	do	14.0	13.3	13.4	—	14.6	13.6	13.8	—	19.8	18.1	17.6
Tomatoes, canned	do	11.0	10.5	9.8	—	11.7	12.6	12.9	—	11.2	9.8	9.8
Sugar, granulated	Pound	7.0	6.9	6.9	5.7	7.4	7.6	7.5	5.9	7.4	7.5	7.5
Tea	do	82.8	84.8	84.2	60.0	87.8	85.3	85.3	60.0	100.9	97.7	98.7
Coffee	do	45.1	40.5	40.3	30.0	51.1	47.5	47.5	34.5	50.3	47.3	46.4
Prunes	do	16.8	14.5	13.4	—	19.3	17.9	17.3	—	18.7	16.4	15.9
Raisins	do	14.4	13.9	13.4	—	15.9	15.2	15.5	—	16.1	15.3	14.8
Bananas	Dozen	29.2	26.2	26.3	—	31.4	31.6	31.0	—	32.0	28.3	30.8
Oranges	do	46.0	39.1	39.4	—	52.7	51.3	55.0	—	43.8	60.0	56.3

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Kansas City, Mo.			Little Rock, Ark.			Los Angeles, Calif.			Louisville, Ky.			Manchester, N. H.		
Oct. 15— 1913	Sept. 15, 1927	Oct. 15, 1927	Oct. 15— 1913	Sept. 15, 1927	Oct. 15, 1927	Oct. 15— 1913	Sept. 15, 1927	Oct. 15, 1927	Oct. 15— 1913	Sept. 15, 1927	Oct. 15, 1927	Oct. 15— 1913	Sept. 15, 1927	Oct. 15, 1927
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
24.9	39.2	39.0	40.0	25.0	34.2	37.3	38.2	24.0	36.3	39.0	39.1	23.0	36.3	37.2
22.3	34.1	34.2	34.9	20.0	31.6	35.4	35.4	21.0	29.7	31.6	31.3	20.0	32.4	34.0
18.0	27.2	27.4	28.1	20.0	27.3	30.0	30.7	19.4	29.6	31.2	30.5	18.2	26.6	27.1
15.6	20.0	20.5	21.3	17.5	22.5	22.8	23.4	15.8	20.2	20.7	21.3	15.9	19.8	21.3
12.2	13.0	14.5	15.6	12.5	15.9	17.8	18.3	13.3	14.0	14.7	13.1	15.8	17.3	16.7
23.1	42.6	40.5	42.5	21.3	37.7	35.3	37.8	25.4	46.7	47.6	46.0	21.9	39.1	37.1
31.3	52.7	45.1	46.8	36.7	53.0	47.7	46.8	33.1	60.7	54.4	55.0	29.5	52.2	47.7
28.4	61.2	51.7	51.5	30.0	58.5	49.6	52.7	35.0	71.4	68.1	68.5	29.0	55.7	50.0
18.3	34.8	35.3	35.9	18.8	40.1	41.4	38.6	18.6	36.2	37.4	37.3	18.2	39.3	41.3
16.1	33.6	29.8	30.7	19.0	30.7	28.4	30.8	20.2	44.3	40.7	41.4	21.8	36.9	39.3
37.5	35.8	35.6	35.6	32.8	33.4	33.7	32.8	32.3	33.5	35.3	32.4	32.6	36.1	34.1
9.3	13.0	13.0	10.0	10.0	15.0	15.0	10.0	15.0	15.0	8.8	12.0	12.0	8.0	14.0
11.8	11.8	11.8	—	11.9	12.0	12.2	—	10.2	10.2	10.2	—	11.7	12.0	11.9
38.8	52.3	51.4	53.1	45.0	53.3	50.9	53.8	39.5	54.6	54.9	57.1	39.2	55.9	52.4
27.6	25.5	25.5	—	30.1	28.2	27.8	—	31.5	26.2	26.3	—	31.3	27.4	27.1
21.8	35.9	37.1	38.3	23.3	36.3	37.2	38.5	19.5	39.3	38.3	38.4	22.5	37.1	37.5
16.4	22.3	19.7	19.9	16.5	23.8	21.5	22.9	17.9	23.9	19.7	20.3	16.1	21.0	18.0
27.8	27.6	26.6	—	24.0	20.5	20.7	—	25.6	24.8	24.2	—	30.8	28.6	28.5
35.0	47.3	40.1	49.4	35.0	45.7	42.5	46.8	52.5	62.8	57.1	53.9	30.0	49.4	42.1
42.0	—	40.5	—	40.0	—	40.0	—	49.4	—	44.0	—	41.0	—	40.0
8.0	9.8	9.6	9.7	6.0	9.5	9.2	9.2	6.0	8.6	8.5	8.5	5.7	9.3	9.2
3.0	5.4	5.1	4.9	3.6	6.3	6.0	6.1	3.4	5.4	5.2	5.1	3.5	6.0	5.9
2.8	4.8	4.9	5.2	2.8	4.1	4.0	4.1	3.4	5.5	5.6	5.6	2.4	8.8	4.2
9.4	9.1	9.1	—	10.6	10.2	10.3	—	10.2	10.0	10.0	—	8.5	8.5	8.5
11.2	10.0	10.0	—	11.9	10.2	10.3	—	10.1	9.4	9.4	—	10.8	9.8	9.7
26.7	26.9	27.3	—	25.7	26.4	26.5	—	25.1	24.9	24.9	—	26.1	25.1	24.8
20.2	19.9	20.0	—	20.3	20.2	20.8	—	18.1	18.5	18.5	—	18.6	18.9	18.9
8.7	10.9	10.1	9.6	8.3	9.8	8.9	8.4	7.7	11.0	10.0	10.0	8.7	11.5	11.6
9.2	9.6	9.7	—	9.7	9.3	9.3	—	9.0	9.9	9.6	—	7.4	8.9	8.4
1.9	3.7	2.2	2.5	2.4	4.6	3.9	3.6	1.7	3.8	3.4	3.0	2.2	3.9	2.9
5.3	6.0	5.3	—	5.9	6.3	6.0	—	4.7	5.2	4.7	—	5.8	6.1	5.5
3.7	4.3	3.9	—	4.5	4.3	4.8	—	3.9	4.5	4.2	—	4.5	5.1	5.0
12.7	12.4	12.2	—	11.0	10.2	10.5	—	11.4	10.8	10.8	—	10.2	10.2	10.2
15.0	14.3	14.5	—	16.5	16.0	16.3	—	16.5	15.7	15.6	—	15.6	15.4	15.1
15.7	14.9	15.3	—	18.7	17.6	17.1	—	17.6	16.4	16.4	—	16.3	14.8	14.8
12.3	11.4	11.4	—	10.8	10.1	10.2	—	15.0	15.0	14.7	—	10.7	11.1	10.8
5.7	7.3	7.5	7.5	5.5	7.9	7.7	7.7	5.5	6.8	7.0	7.0	5.4	7.4	7.5
34.0	86.7	90.2	92.0	50.0	106.3	104.5	104.5	54.5	75.5	74.1	74.4	65.0	86.9	90.6
27.8	53.8	48.5	48.9	30.8	53.6	50.8	52.3	36.3	53.7	51.2	51.2	27.5	51.3	47.2
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.5	—	51.0	47.3	48.6
18.2	15.5	14.8	—	18.7	15.1	15.5	—	16.5	13.5	12.6	—	16.7	18.9	15.7
15.1	14.8	14.8	—	15.6	15.3	15.0	—	13.1	12.7	12.4	—	15.7	14.9	14.5
10.9	10.0	10.0	—	10.8	8.3	8.5	—	10.1	9.6	9.9	—	10.3	9.9	10.2
54.1	49.6	55.0	—	60.7	50.9	54.3	—	45.4	51.1	50.				

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article	Unit	Memphis, Tenn.			Milwaukee, Wis.			Minneapolis, Minn.			
		Oct. 15—		Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		
		1913	1926		1913	1926			1913	1926	
Sirloin steak	Pound	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	
Round steak	do	24.0	36.3	39.3	39.8	23.6	39.3	41.4	41.6	23.0	30.7
Rib roast	do	20.0	32.9	36.4	37.3	21.6	34.9	36.7	36.3	21.3	29.0
Chuck roast	do	21.0	27.3	28.4	28.4	18.8	28.1	29.1	29.4	20.0	25.6
Plate beef	do	15.4	20.2	22.0	22.9	16.4	24.7	25.8	26.2	17.0	20.8
Pork chops	do	11.9	16.3	17.6	18.9	12.1	14.6	15.3	15.8	10.1	12.4
Bacon, sliced	do	20.5	38.2	34.9	37.4	21.2	41.3	41.3	41.0	20.8	39.4
Ham, sliced	do	31.0	44.6	41.2	38.9	28.6	52.4	45.9	46.8	27.7	52.5
Lamb, leg of	do	29.0	57.9	52.8	52.4	29.0	54.7	47.5	47.4	32.7	57.5
Hens	do	20.0	40.7	38.0	36.2	19.5	38.5	38.2	37.7	14.8	35.2
Salmon, canned, red	do	19.5	31.6	30.0	31.9	18.8	33.5	31.0	30.1	17.2	31.1
Milk, fresh	Quart	do	34.0	33.8	30.3	33.8	33.8	33.2	33.8	30.7	36.6
Milk, evaporated	15-16 oz. can	do	10.0	15.0	15.0	7.0	11.0	11.0	11.0	8.0	11.0
Butter	Pound	do	38.8	52.1	52.4	54.8	35.0	52.8	52.5	53.8	35.5
Oleomargarine (all butter substitutes)	do	25.4	25.6	25.6	25.6	27.5	26.4	27.1	27.1	28.1	25.4
Cheese	do	20.8	33.9	36.8	38.4	22.0	35.1	35.9	37.2	20.8	35.1
Lard	do	16.3	18.8	16.9	16.7	15.8	22.0	19.3	19.7	15.7	20.5
Vegetable lard substitute	do	22.2	21.8	21.6	21.6	26.8	26.6	26.6	26.7	27.2	27.0
Eggs, strictly fresh	Dozen	do	29.6	46.8	39.2	43.7	35.0	53.2	43.1	51.4	34.0
Eggs, storage	do	do	39.0	39.0	39.0	39.0	41.6	41.6	37.0	41.0	35.0
Bread	Pound	do	6.0	9.6	9.5	9.5	5.7	9.0	9.1	9.1	8.9
Flour	do	3.5	6.2	6.1	6.1	3.0	5.3	5.0	4.9	2.8	5.5
Corn meal	do	2.5	3.9	4.1	3.8	3.7	5.5	5.6	5.6	2.5	5.4
Rolled oats	do	9.1	9.0	9.0	9.0	8.5	8.4	8.4	8.4	7.9	8.1
Corn flakes	8-oz. pkg.	do	10.9	9.8	9.8	9.8	10.3	9.2	9.2	10.7	10.0
Wheat cereal	28-oz. pkg.	do	25.6	25.8	25.8	25.8	24.5	24.7	24.7	25.6	25.7
Macaroni	Pound	do	19.2	19.4	19.4	19.4	18.0	17.4	17.5	18.9	19.1
Rice	do	8.1	10.3	8.9	8.7	9.0	11.8	10.6	10.4	8.6	11.7
Beans, navy	do	do	9.3	9.3	9.3	9.3	8.3	8.6	8.7	9.0	9.8
Potatoes	do	2.1	4.5	3.8	3.3	1.6	3.4	2.8	2.6	1.3	3.2
Onions	do	do	4.8	5.1	4.8	4.8	4.6	5.2	4.5	4.6	5.4
Cabbage	do	do	3.7	4.1	3.7	3.7	3.1	3.4	3.0	3.2	3.2
Beans, baked	No. 2 can	do	11.9	11.0	11.0	11.0	11.0	10.8	10.9	12.3	12.0
Corn, canned	do	do	15.6	14.7	14.6	14.6	15.6	15.5	15.6	14.6	13.5
Peas, canned	do	do	17.1	15.8	15.6	15.6	16.3	15.2	15.5	14.8	14.2
Tomatoes, canned	do	do	10.4	9.9	9.9	9.9	13.4	13.3	13.3	13.5	13.3
Sugar, granulated	Pound	do	5.6	7.0	7.1	6.9	5.5	6.9	6.9	5.6	7.2
Tea	do	do	63.8	99.0	98.4	98.4	50.0	70.8	71.3	70.0	45.0
Coffee	do	do	27.5	50.2	47.3	47.3	27.5	46.9	41.9	42.7	30.8
Prunes	do	do	17.3	14.6	14.0	14.0	16.9	14.6	14.3	17.0	14.9
Raisins	do	do	15.4	14.7	14.7	14.7	14.7	14.4	14.5	14.9	14.3
Bananas	Dozen	do	9.6	8.4	8.6	8.6	9.8	9.3	9.5	11.3	10.7
Oranges	do	do	51.6	47.6	45.4	45.4	54.2	52.0	53.7	56.2	60.3

¹ Whole.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Mobile, Ala.			Newark, N. J.			New Haven, Conn.			New Orleans, La.			New York, N. Y.							
Oct. 15, 1926	Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Oct. 15, 1927	Oct. 15—		Oct. 15, 1927	Oct. 15—		Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927				
			1913	1926		1913	1926		1913	1926		1913	1926		1913	1926			
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.			
34.1	35.9	36.4	27.7	46.2	48.3	31.8	54.2	58.3	58.7	21.5	35.8	37.5	37.2	26.1	45.8	49.7	49.9		
35.8	35.0	35.5	27.7	43.3	46.2	46.3	29.6	43.7	47.5	47.3	19.0	31.5	33.3	32.8	25.5	44.1	47.0	46.8	
31.7	29.1	30.5	21.0	35.6	37.5	38.7	24.2	35.8	38.3	38.4	18.4	30.1	31.2	31.4	21.6	39.2	41.0	41.9	
27.3	23.6	24.1	18.6	24.5	26.9	27.5	20.0	26.9	29.2	29.0	15.5	20.7	21.3	22.1	16.0	25.1	27.0	28.1	
23.7	17.1	17.8	18.2	12.0	13.1	13.7	15.0	—	15.8	15.9	11.2	17.5	17.7	18.2	14.8	20.0	21.4	22.0	
14.0	41.4	38.2	40.0	24.0	42.2	41.7	42.1	23.6	46.8	42.0	25.0	39.9	40.4	40.4	22.9	45.7	44.5	45.2	
39.4	51.9	46.2	45.8	25.8	48.9	46.0	45.8	29.7	51.7	44.7	30.4	51.4	46.4	45.9	25.7	51.5	48.5	48.9	
47.2	56.5	51.8	52.1	20.8	56.9	53.8	54.3	32.8	63.8	57.3	26.0	54.0	50.1	50.9	29.5	64.6	59.4	58.4	
50.8	41.7	41.4	41.4	19.0	38.7	38.9	38.3	18.3	39.9	40.0	39.2	21.0	39.1	38.8	38.5	15.2	36.6	38.3	37.5
34.1	37.7	33.6	35.0	23.0	38.1	37.3	37.5	23.5	42.3	40.2	40.5	21.0	37.1	37.1	36.5	21.8	40.4	38.7	38.7
30.8	39.3	31.3	34.5	—	34.7	31.4	32.3	—	33.7	33.9	33.6	—	38.7	37.4	37.9	—	34.2	33.0	33.5
36.6	17.8	17.8	9.0	15.0	16.0	9.0	16.0	16.0	16.0	9.5	14.0	14.0	9.0	15.0	16.0	16.0	16.0	16.0	
12.0	11.7	11.5	11.7	—	11.2	11.3	11.1	—	12.0	12.1	12.1	—	11.0	11.2	11.1	—	11.1	11.1	11.1
11.8	56.3	52.4	54.9	39.2	50.2	55.5	59.6	36.8	53.9	52.4	54.9	37.5	53.6	53.5	55.6	37.5	55.8	55.7	58.4
32.8	30.8	29.3	29.1	—	30.3	29.8	30.6	—	31.8	29.5	29.1	—	30.7	28.7	29.5	—	30.7	27.7	27.6
25.7	36.9	37.3	38.0	24.8	39.5	44.1	40.4	23.5	33.4	39.4	39.6	21.4	36.0	37.9	38.1	19.8	38.0	39.8	39.8
36.7	21.3	19.2	19.8	16.3	22.1	19.4	19.8	15.7	21.7	18.5	18.8	14.9	21.4	19.2	19.6	16.3	21.7	20.5	20.5
18.3	21.2	21.2	21.0	—	25.7	25.6	25.5	—	25.5	25.5	25.6	—	20.8	19.0	19.4	—	26.6	25.9	25.9
37.0	60.0	45.6	47.6	52.7	70.8	59.4	69.2	52.9	77.2	64.4	73.2	34.3	50.2	42.6	45.1	47.9	72.4	60.6	74.1
4.8	49.3	41.3	—	47.3	—	43.3	—	51.0	—	49.6	—	41.2	—	36.0	—	47.7	—	43.9	
5.0	9.6	10.1	10.1	5.6	9.3	9.5	9.5	6.0	9.2	9.2	9.2	5.0	8.9	8.8	8.7	6.0	9.6	9.7	9.7
8.9	6.4	6.1	6.1	3.6	5.8	5.5	5.3	3.2	5.7	5.5	5.5	3.8	7.0	6.7	6.6	3.2	5.6	5.5	5.5
5.2	3.9	4.1	4.1	3.0	6.6	6.5	6.8	3.2	6.7	6.8	6.9	2.9	3.9	4.4	4.2	3.5	6.2	6.4	6.6
5.4	8.7	8.5	8.5	—	8.4	8.5	8.3	—	9.3	9.1	9.4	—	8.9	8.9	8.9	—	8.5	8.6	8.7
8.1	11.1	9.5	9.5	—	10.0	8.6	8.6	—	10.7	10.0	10.1	—	10.3	9.7	9.7	—	10.0	8.6	8.8
9.8	25.0	24.3	24.9	—	24.3	24.1	24.2	—	24.6	24.9	24.9	—	24.4	24.6	24.6	—	23.9	23.9	23.9
5.6	20.6	20.7	20.7	—	21.0	21.4	21.4	—	22.0	22.2	22.3	—	10.0	10.7	10.6	—	20.9	21.1	21.1
8.8	11.3	10.0	9.6	9.0	11.1	10.7	10.4	0.3	11.9	10.3	10.5	7.5	9.8	9.7	9.5	8.0	10.6	9.7	10.1
1.5	9.0	8.6	8.8	—	9.6	9.8	9.8	—	9.6	9.3	9.5	—	8.3	8.6	8.8	—	10.3	10.2	10.3
3.8	4.9	4.4	3.7	2.5	1.2	3.3	3.3	1.7	3.5	3.1	3.2	2.1	4.5	4.2	4.0	2.4	4.1	3.3	3.6
3.9	5.0	5.4	4.9	—	4.9	5.5	4.9	—	5.4	5.9	5.5	—	4.1	4.6	4.5	—	4.8	5.4	5.0
7.7	4.6	4.8	4.7	—	4.4	4.5	4.5	—	4.0	4.5	4.5	—	3.9	4.6	4.4	—	3.9	3.7	3.6
9.2	10.9	10.3	10.3	—	10.7	10.6	10.7	—	11.0	11.5	11.6	—	11.0	10.8	10.9	—	10.8	10.9	11.2
4.4	17.3	15.5	15.8	—	16.6	15.7	15.3	—	19.0	18.4	18.3	—	15.2	14.7	14.4	—	14.8	14.3	14.3
1.1	16.2	15.4	15.4	—	17.3	16.8	17.8	—	20.1	18.4	18.4	—	17.6	17.0	17.9	—	15.3	14.4	14.6
5.5	10.8	10.5	10.3	—	11.3	10.9	10.6	—	12.7	13.8	13.5	—	11.1	10.6	10.7	—	10.9	11.3	11.2
2	7.2	7.2	7.1	5.2	6.7	6.8	6.7	5.5	7.0	7.2	7.1	5.1	6.6	6.8	6.7	4.9	6.4	6.4	6.4
3	79.8	80.0	80.3	53.8	63.5	61.0	61.8	55.0	60.4	58.9	60.3	62.1	83.3	78.8	79.3	43.3	64.9	66.5	67.1
6	50.1	47.3	47.7	29.3	40.8	46.3	46.8	33.8	52.9	48.9	48.8	25.0	36.2	36.6	35.7	27.2	47.6	45.2	45.4
1	18.2	15.6	15.7	—	15.2	14.5	14.2	—	16.4	14.6	14.5	—	18.3	16.6	15.9	—	15.1	13.4	13.0
0	18.1	13.8	14.1	—	14.9	14.2	14.3	—	14.0	13.8	13.7	—	14.5	13.7	13.6	—	14.9	13.9	13.9
4	21.7	21.9	24.4	—	38.1	38.3	37.5	—	34.2	33.2	33.4	—	18.6	17.5	16.7	—	38.7	35.4	35.4
3	48.4	47.5	47.5	—	63.5	59.0	65.8	—	61.8	59.6	67.3	—	57.0	45.6	51.9	—	69.7	65.8	74.3

* Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article	Unit	Norfolk, Va.			Omaha, Nebr.			Peoria, Ill.		
		Oct. 15, 1926	Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927	Oct. 15, 1926	Sept. 15, 1927
					1913	1926				
Sirloin steak	Pound	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Round steak	do	41.5	42.1	42.5	25.6	38.4	39.9	39.8	35.4	35.7
Rib roast	do	35.4	36.3	37.0	22.8	35.8	38.1	37.4	33.8	34.6
Chuck roast	do	32.0	32.7	32.0	19.4	26.7	27.8	27.4	25.0	25.5
Plate beef	do	22.9	23.6	23.3	13.1	22.1	23.1	23.5	21.3	22.5
Pork chops	do	39.6	38.2	38.6	21.9	42.0	38.6	41.1	38.5	35.8
Bacon, sliced	do	50.5	43.1	45.1	28.6	54.8	48.2	49.1	52.0	48.8
Ham, sliced	do	52.0	46.7	48.3	30.0	62.4	51.2	50.3	57.5	55.0
Lamb, leg of	do	15.6	16.3	15.9	11.8	12.4	13.2	13.0	14.4	14.8
Héns	do	38.5	35.1	35.7	16.3	31.7	30.9	29.9	33.7	32.4
Salmon, canned, red	do	36.9	35.1	36.5	—	37.4	35.1	34.9	36.7	34.8
Milk, fresh	Quart	17.5	17.5	18.0	8.2	11.3	11.3	11.3	12.0	13.0
Milk, evaporated	15-16 oz. can	11.5	11.8	11.8	—	11.6	11.8	11.7	11.5	11.2
Butter	Pound	56.7	55.3	57.8	37.0	50.5	48.3	51.0	49.9	49.8
Oleomargarine (all butter substitutes)	do	28.0	26.3	26.4	—	29.9	26.1	26.0	29.6	27.7
Cheese	do	33.6	35.8	35.8	23.3	35.5	38.0	37.7	35.1	36.6
Lard	do	20.6	19.2	19.1	17.6	24.1	19.7	20.3	22.6	18.8
Vegetable lard substitute	do	23.5	22.9	22.5	—	27.8	25.9	26.0	27.0	27.4
Eggs, strictly fresh	Dozen	56.8	51.9	60.0	30.0	45.6	35.8	42.1	46.8	39.4
Eggs, storage	do	48.0	—	42.8	—	41.5	—	37.8	42.0	—
Bread	Pound	9.9	9.9	9.9	5.2	10.3	9.7	9.7	10.1	10.0
Flour	do	5.9	5.7	5.6	2.7	5.0	4.6	4.6	5.6	5.3
Corn meal	do	4.6	4.7	4.7	2.5	4.9	4.7	4.9	4.9	4.8
Rolled oats	do	8.8	8.6	8.6	—	10.3	10.1	10.1	9.1	9.2
Corn flakes	8-oz. pkg.	10.3	9.7	9.7	—	12.5	10.2	10.1	11.8	10.2
Wheat cereal	28-oz. pkg.	24.2	25.2	25.0	—	28.3	27.9	27.8	25.6	26.3
Macaroni	Pound	19.0	19.1	19.1	—	21.1	21.3	21.3	19.9	18.6
Rice	do	12.1	11.5	11.7	8.5	11.5	11.1	11.0	11.7	11.4
Beans, navy	do	8.2	8.2	8.8	—	9.5	10.3	10.1	8.6	8.9
Potatoes	do	4.4	3.9	3.8	1.8	3.7	2.6	2.4	3.8	2.7
Onions	do	5.2	5.6	5.4	—	5.2	5.4	5.1	5.8	5.9
Cabbage	do	4.6	4.5	4.5	—	3.6	3.6	3.2	3.3	3.8
Beans, baked	No. 2 can	10.0	9.9	9.8	—	14.0	13.0	12.9	12.2	11.1
Corn, canned	do	15.8	14.7	15.4	—	15.9	16.2	16.4	15.8	14.6
Peas, canned	do	20.6	18.7	18.5	—	15.8	15.3	15.3	18.3	17.2
Tomatoes, canned	do	10.1	9.9	9.9	—	13.7	12.8	13.1	13.6	12.5
Sugar, granulated	Pound	6.7	6.9	6.9	5.8	7.3	7.6	7.5	7.6	8.4
Ten	do	93.2	96.4	96.4	56.0	78.8	77.8	78.4	68.6	70.9
Coffee	do	50.1	46.9	47.2	30.0	57.5	53.4	53.6	52.1	46.8
Prunes	do	15.8	15.7	14.9	—	17.0	16.4	14.8	19.5	17.0
Raisins	do	14.6	14.5	14.2	—	15.4	15.2	15.0	15.0	14.5
Bananas	Dozen	33.9	34.5	33.5	—	11.5	11.0	11.1	10.2	9.6
Oranges	do	58.1	50.6	60.7	—	50.9	46.5	44.8	49.2	51.0

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Philadelphia, Pa.			Pittsburgh, Pa.			Portland, Me.			Portland, Oreg.			Providence, R. I.		
Oct. 15—		Sept. 15,	Oct. 15—		Sept. 15,	Oct. 15—		Sept. 15,	Oct. 15—		Sept. 15,	Oct. 15—		
1913	1926	1927	1913	1926	1927	1913	1926	1927	1913	1926	1927	1913	1926	1927
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
31.2	56.1	59.8	15.91	27.7	47.7	49.8	50.2	62.6	64.7	103.9	23.5	29.6	31.7	31.1
26.4	42.0	45.9	45.4	23.7	40.1	41.9	41.9	47.3	48.5	47.8	21.0	26.9	20.0	28.9
22.1	36.6	38.3	38.2	21.7	34.2	35.5	36.0	29.9	32.2	32.2	19.6	24.9	25.8	24.2
18.2	26.1	27.8	27.8	25.5	27.7	28.3	21.6	22.3	22.6	16.9	18.3	19.7	19.4	18.8
11.5	12.7	14.0	14.0	12.8	13.5	14.1	14.2	16.4	18.3	18.7	13.8	13.2	14.3	14.4
23.3	46.8	45.6	45.3	23.2	45.2	45.4	46.6	44.5	42.7	44.4	23.4	41.1	39.6	38.8
27.5	49.2	45.7	45.6	30.6	56.5	51.4	47.1	42.9	43.1	31.5	58.1	53.3	53.6	22.2
31.9	61.9	56.4	55.7	29.9	65.7	59.3	59.0	61.6	55.7	56.5	30.8	60.3	55.8	56.0
10.1	40.0	40.8	40.3	20.0	40.5	41.0	41.4	36.7	39.1	37.9	16.9	35.5	35.8	35.6
23.1	41.1	39.0	39.9	25.5	41.4	42.1	42.6	42.0	40.8	40.8	21.3	33.8	31.6	29.7
33.5	32.2	34.1	34.5	31.8	32.6	37.8	33.4	35.0	32.6	33.7	35.0	36.2	33.4	33.0
8.0	12.5	13.0	13.0	8.8	14.0	15.0	13.8	13.8	13.8	9.7	12.0	12.0	9.0	14.8
11.5	11.7	11.8	—	11.5	11.1	11.1	12.5	12.7	12.5	—	10.7	10.7	10.7	12.1
43.1	58.1	57.5	61.0	39.5	57.1	56.5	58.7	54.9	55.0	57.2	42.0	53.4	54.4	54.8
30.8	28.5	28.6	—	31.1	30.7	30.8	28.3	27.5	26.4	—	30.3	26.8	26.4	29.5
25.0	39.6	40.0	40.4	24.5	38.6	40.1	40.6	38.1	37.9	38.6	20.8	38.2	38.5	38.3
15.6	21.7	18.0	18.6	15.7	22.2	18.6	19.5	20.6	18.2	18.9	18.3	24.3	30.3	21.0
25.3	25.4	25.4	—	27.6	27.3	27.3	25.4	26.9	26.4	—	28.9	28.3	28.9	26.8
42.5	62.6	52.1	62.5	38.0	58.3	49.7	58.4	68.8	63.1	68.5	49.0	53.3	43.5	52.6
47.4	—	47.0	—	44.8	—	40.7	48.2	—	44.0	—	45.0	—	43.0	—
4.8	9.5	9.4	9.4	5.5	9.3	9.0	9.0	10.1	10.3	10.3	5.6	9.5	9.3	9.3
3.2	5.5	5.2	5.2	3.2	5.5	5.3	5.2	5.7	5.5	5.4	2.9	5.2	5.1	5.0
2.8	4.8	4.8	3.0	6.3	5.9	5.7	5.1	5.0	5.0	3.4	5.0	5.5	3.1	5.1
8.7	8.6	8.6	—	9.3	9.1	9.1	8.0	8.0	8.0	7.9	—	10.4	10.2	10.1
10.1	9.5	9.4	—	10.4	10.0	9.8	11.6	9.6	9.6	—	11.4	9.6	9.6	10.8
24.6	24.6	24.6	—	25.1	25.1	24.9	25.9	25.6	25.5	—	26.8	26.6	27.0	25.5
21.0	20.7	20.7	—	23.3	23.3	23.4	24.6	24.0	24.1	—	18.0	18.2	18.3	23.3
9.8	12.3	11.3	11.3	9.2	13.0	11.4	11.4	13.1	12.3	12.2	8.6	10.9	10.5	10.2
9.0	9.0	9.3	—	8.2	8.9	9.1	9.5	10.4	10.3	—	9.9	11.2	10.4	9.6
2.3	4.4	3.5	3.6	1.9	3.7	3.2	3.0	3.2	2.6	2.8	1.3	2.4	2.7	2.6
5.0	4.9	4.2	—	5.5	5.3	5.2	4.7	4.9	4.6	—	3.6	3.7	3.6	4.5
4.3	3.8	3.7	—	4.7	4.4	4.3	3.7	2.7	2.7	—	3.5	3.8	3.2	3.6
10.5	10.9	10.9	—	12.7	12.8	12.9	14.8	14.1	13.8	—	13.3	12.0	11.8	11.2
14.6	14.5	14.0	—	16.6	16.0	16.1	16.1	14.4	14.2	—	18.8	18.3	18.1	17.7
15.5	15.0	14.9	—	17.2	16.9	16.9	19.0	17.5	17.3	—	18.6	18.1	17.5	19.5
11.6	11.7	11.7	—	12.4	11.9	11.6	20.6	13.1	12.7	—	16.4	16.6	16.5	13.6
5.0	6.7	6.7	6.7	5.7	7.2	7.3	7.4	7.0	7.3	7.3	6.2	7.2	7.2	5.1
54.0	72.1	67.8	67.3	58.0	85.8	83.0	83.0	61.9	62.2	62.2	55.0	76.9	78.0	76.4
24.5	45.6	39.2	39.2	30.0	51.3	46.0	46.2	53.8	49.5	49.3	35.0	52.6	51.3	50.7
14.7	13.3	13.3	—	18.5	16.3	15.8	15.1	13.8	13.8	—	10.5	11.4	10.3	16.5
14.2	13.4	13.6	—	14.8	14.3	14.4	13.7	13.1	13.0	—	13.9	13.5	13.5	14.3
30.1	29.6	30.7	—	39.2	38.2	39.1	10.8	11.0	11.1	—	12.9	12.8	12.8	33.8
60.8	56.9	61.2	—	59.0	60.0	59.2	64.1	66.4	71.1	—	51.0	52.5	60.6	66.3

¹ No. 3 can.² No. 2½ can.⁴ Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article	Unit	Richmond, Va.			Rochester, N.Y.			St. Louis, Mo.			
		Oct. 15—		Oct. 15, 1927	Oct. 15—		Oct. 15, 1927	Oct. 15—		Oct. 15, 1927	
		1913	1926		1913	1926		1913	1926		
Sirloin steak	Pound	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	
Round steak	do	22.2	39.8	41.8	40.8	41.8	44.2	43.7	26.0	37.6	39.0
Rib roast	do	20.0	35.4	37.6	36.0	35.2	36.8	36.9	24.3	36.2	38.3
Chuck roast	do	18.9	32.2	33.3	32.8	30.6	32.3	32.4	19.5	30.6	30.8
Plate beef	do	15.9	23.2	23.6	23.8	25.0	26.1	27.1	15.6	21.6	22.5
Pork chops	do	12.6	16.1	17.3	16.8	14.3	14.4	15.0	11.9	15.1	15.2
Bacon, sliced	do	22.0	43.3	41.5	42.4	45.9	44.4	44.6	19.8	38.7	37.4
Ham, sliced	do	27.2	48.6	42.8	44.4	46.5	41.6	41.4	26.9	48.9	43.0
Lamb, leg of	do	25.0	48.5	46.4	44.6	53.7	54.1	53.9	27.3	58.8	51.0
Hens	do	19.3	45.3	43.6	42.9	37.5	38.7	38.7	18.3	38.1	37.4
Salmon, canned, red	do	20.4	37.0	32.9	33.5	41.5	38.9	39.4	16.8	33.7	31.7
Milk, fresh	Quart	36.2	34.0	35.3	34.2	34.2	35.5	—	36.5	34.0	36.0
Milk, evaporated	15-16 oz. can.	10.0	14.0	14.0	12.5	13.5	13.5	8.8	13.0	13.0	13.0
Butter	Pound	42.0	58.5	56.1	57.6	55.5	52.4	55.1	37.9	56.2	55.3
Oleomargarine (all butter substitutes)	do	32.0	31.4	31.3	30.6	29.8	29.6	—	27.7	26.7	26.6
Cheese	do	22.3	35.9	36.8	36.8	36.0	38.6	39.2	10.3	35.3	36.8
Lard	do	15.4	21.0	18.8	19.2	20.5	18.4	18.6	13.1	18.0	15.9
Vegetable lard substitute	do	25.5	25.9	25.9	24.1	24.7	24.7	—	25.9	25.5	25.5
Eggs, strictly fresh	Dozen	34.5	51.5	43.2	52.6	63.9	48.0	64.0	31.0	48.0	40.7
Eggs, storage	do	43.0	—	40.7	50.0	—	45.7	—	43.1	—	37.6
Bread	Pound	5.4	9.5	9.4	9.4	9.0	9.0	5.6	5.6	9.8	9.9
Flour	do	3.2	5.9	5.6	5.6	5.7	5.4	5.3	2.9	5.3	5.2
Corn meal	do	2.3	4.6	4.9	4.9	5.6	6.2	6.1	2.5	4.3	4.5
Rolled oats	do	—	9.0	8.6	8.3	9.2	9.4	9.1	—	8.7	8.5
Corn flakes	8-oz. pkg.	11.3	9.7	9.7	10.1	9.4	9.6	—	10.2	8.9	9.0
Wheat cereal	28-oz. pkg.	25.8	25.9	25.9	25.4	25.0	25.0	—	24.2	24.7	24.7
Macaroni	Pound	20.2	20.9	20.9	21.0	20.3	20.3	—	21.0	20.1	20.1
Rice	do	10.0	13.3	11.9	11.6	10.9	10.0	10.4	8.2	11.0	10.2
Beans, navy	do	—	9.1	9.1	9.8	8.9	9.4	9.5	—	7.9	8.7
Potatoes	do	2.1	4.9	3.4	3.4	2.8	2.5	2.5	1.9	4.3	3.4
Onions	do	—	7.1	7.1	6.1	4.7	4.9	4.5	—	5.0	5.9
Cabbage	do	—	4.6	4.0	3.8	4.0	2.5	2.2	—	3.3	4.0
Beans, baked	No. 2 can	10.1	10.1	10.1	10.4	10.2	10.2	—	10.6	10.3	10.5
Corn, canned	do	15.6	15.1	15.1	16.1	16.6	16.6	—	16.4	15.2	15.6
Peas, canned	do	20.1	18.8	18.6	18.4	18.0	17.7	—	16.3	15.3	15.5
Tomatoes, canned	do	10.5	10.5	10.5	13.4	13.4	13.4	—	11.3	11.3	11.2
Sugar, granulated	Pound	5.4	7.1	7.1	6.7	6.6	6.7	5.3	7.2	7.2	7.1
Tea	do	56.0	90.5	91.5	91.4	88.7	89.7	89.7	55.0	74.8	76.5
Coffee	do	27.4	49.4	46.2	46.0	47.9	44.3	44.8	24.4	48.6	45.1
Prunes	do	—	17.2	15.5	15.1	16.7	15.2	15.3	—	18.4	17.7
Raisins	do	—	14.8	14.1	13.9	14.3	14.6	14.6	—	15.0	14.4
Bananas	Dozen	37.3	36.5	38.5	36.3	36.4	36.4	—	32.7	32.5	30.8
Oranges	do	56.2	55.8	54.2	52.3	56.2	58.2	—	54.5	54.1	55.2

¹ No. 2½ can.

RETAIL PRICES OF FOOD

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CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

St. Paul, Minn.			Salt Lake City, Utah				San Francisco, Calif.				Savannah, Ga.				Scranton, Pa.			
Oct. 15— 1913	Sept. 15, 1927	Oct. 15, 1927	Oct. 15— 1913		Sept. 15, 1927		Oct. 15, 1927		Oct. 15— 1913		Sept. 15, 1927		Oct. 15, 1927		Oct. 15— 1913		Sept. 15, 1927	
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
25.4	36.6	39.9	38.6	22.6	30.8	33.1	33.1	21.4	31.4	33.2	33.8	34.2	35.8	35.0	26.0	51.6	53.7	53.3
23.0	31.9	34.1	33.9	20.0	27.4	30.6	30.5	19.7	28.6	30.4	31.0	27.9	29.6	28.8	22.0	43.0	44.5	44.5
20.4	29.3	32.1	31.1	19.4	23.5	25.1	25.7	21.3	29.4	30.6	31.2	27.5	27.9	27.5	23.0	37.8	38.5	38.9
16.8	23.3	24.6	25.1	15.0	17.8	19.6	20.2	15.2	18.9	19.7	20.3	18.8	18.8	18.0	17.6	28.2	28.8	29.5
10.8	13.2	14.5	15.1	12.5	13.1	14.2	14.5	14.2	14.2	15.5	15.9	14.0	15.8	15.8	11.9	12.4	13.7	13.7
20.4	38.7	37.6	38.4	24.3	41.1	39.4	39.9	24.2	47.0	43.3	44.3	37.1	32.5	33.5	22.8	47.4	44.0	45.4
27.0	49.8	45.2	45.9	30.0	53.0	46.9	46.9	34.4	64.3	56.7	57.1	46.8	41.9	41.6	27.5	53.9	47.9	48.9
28.8	55.3	48.2	47.1	30.0	60.3	57.5	57.1	34.0	67.9	63.8	63.8	50.0	45.0	45.0	30.0	62.7	56.5	56.5
16.1	33.9	32.8	32.7	16.9	33.6	35.1	35.3	16.7	37.6	38.8	38.7	39.0	40.0	39.0	17.3	44.7	46.1	45.3
18.0	30.2	28.8	28.8	23.3	33.0	29.8	30.4	24.5	44.7	41.8	43.3	35.8	32.6	33.0	21.8	44.9	42.5	43.3
7.8	11.0	11.0	12.0	8.7	11.3	11.0	11.0	10.0	14.0	14.0	14.0	17.0	17.0	17.0	8.8	12.0	12.0	12.0
11.7	12.2	12.0	10.5	10.7	10.6	10.2	10.4	10.4	11.1	11.6	11.5	11.1	11.5	11.5	11.7	11.9	11.9	11.9
36.5	56.6	48.6	50.9	39.0	48.9	51.2	52.1	40.0	55.2	58.0	58.0	56.1	53.1	55.4	36.6	53.2	53.0	55.8
27.9	23.2	25.4	29.7	27.2	27.0	31.4	26.0	25.9	35.0	31.1	31.3	30.3	30.3	30.3	28.2	28.2	28.4	28.4
21.0	34.6	36.1	36.5	24.2	29.9	30.9	30.7	21.0	38.7	39.2	39.1	35.2	36.1	36.0	18.3	35.8	35.9	36.3
15.3	21.0	18.7	19.0	20.0	24.9	21.0	21.6	18.0	25.0	22.8	23.0	21.1	18.9	19.3	16.0	22.2	19.8	19.7
27.3	28.5	28.7	30.0	29.0	29.0	28.0	28.1	28.2	19.1	17.5	18.0	26.2	25.9	26.0	26.0	25.9	25.9	26.0
32.3	46.6	38.8	44.4	42.0	51.5	38.7	46.8	56.4	61.0	47.2	55.7	57.6	49.5	56.7	45.8	58.6	50.9	50.3
41.3	39.6	40.0	40.0	50.2	40.0	50.2	43.0	46.7	46.7	41.0	41.0	41.0	41.0	41.0	45.9	45.9	46.2	46.2
6.0	9.9	9.3	9.5	5.9	9.9	9.7	9.7	5.9	9.8	9.5	9.5	10.5	10.7	10.7	5.6	10.4	10.7	10.6
2.9	5.7	5.3	5.1	2.4	4.3	4.1	4.1	3.4	5.7	5.6	5.6	6.7	6.6	6.5	3.6	6.3	5.9	5.8
2.5	5.3	5.7	5.2	3.4	5.5	5.6	5.6	3.5	6.3	6.4	6.3	3.6	3.8	3.7	7.9	7.8	7.8	7.8
9.9	10.3	10.2	8.9	8.8	8.8	9.7	10.1	10.1	8.7	8.6	8.9	10.0	9.8	9.9	10.9	10.1	10.1	10.1
1.9	10.2	10.2	12.5	10.0	10.1	10.5	9.9	10.1	10.2	9.7	9.6	10.9	10.1	10.1	25.6	25.1	25.3	25.3
27.0	26.7	26.5	25.5	25.7	25.7	25.3	25.3	25.2	24.4	24.3	24.3	26.2	25.9	25.9	23.6	22.9	22.9	22.8
18.5	18.8	18.6	20.2	20.1	19.5	16.0	16.1	16.0	18.3	18.2	18.2	17.0	17.0	17.0	17.8	16.9	17.1	17.1
10.0	12.6	10.4	10.5	8.2	11.2	9.2	9.1	8.5	11.8	11.3	11.1	10.5	9.6	9.6	8.5	11.6	11.2	11.3
9.2	9.6	9.8	9.3	9.3	9.1	9.5	10.3	10.1	10.4	9.8	9.5	10.8	10.8	10.8	10.8	10.8	10.8	10.5
1.3	3.0	1.7	1.8	1.4	2.7	2.0	1.9	1.8	3.7	3.3	3.2	4.5	4.1	3.7	1.9	3.6	3.0	3.1
4.8	5.4	4.5	2.5	3.1	2.6	3.6	4.1	4.3	6.2	6.7	5.9	4.9	5.6	5.1	4.9	5.6	5.1	5.1
2.4	2.0	2.0	2.7	3.0	2.6	3.0	4.9	4.8	4.4	4.4	4.4	3.3	3.2	3.5	11.1	11.2	11.4	11.4
13.9	13.9	13.6	14.2	13.0	12.9	13.3	12.8	13.0	12.5	12.2	12.1	17.4	16.6	16.6	16.9	16.6	16.6	16.9
15.0	14.0	14.4	15.2	14.4	14.7	18.2	17.9	17.9	15.3	15.2	14.7	17.4	16.6	16.6	17.8	16.9	17.1	17.1
15.6	15.5	15.4	16.1	15.7	15.7	18.5	17.6	17.9	16.6	16.8	17.0	17.0	17.0	17.0	17.8	16.9	17.1	17.1
14.3	14.1	14.1	14.5	13.6	14.2	15.3	15.1	15.1	10.2	9.9	9.9	12.3	12.2	12.2	12.3	12.2	12.2	12.3
5.6	7.5	7.4	7.3	5.8	7.9	8.1	8.1	5.4	6.8	7.0	7.0	6.9	7.0	5.5	7.1	7.1	7.1	7.1
45.0	68.1	65.7	65.7	88.5	86.5	86.5	50.0	71.0	72.8	72.8	81.3	82.2	82.6	52.5	67.6	71.3	71.2	71.2
30.0	52.8	52.4	52.2	35.8	56.4	54.4	54.0	32.0	53.7	51.7	52.0	48.1	45.1	31.3	52.4	40.4	40.4	40.4
16.4	15.8	15.2	14.9	14.3	14.0	14.8	12.0	12.1	15.6	14.2	13.5	18.4	15.6	14.4	18.4	15.6	14.4	14.4
15.7	15.6	15.2	14.2	13.3	13.4	13.1	12.8	12.9	15.0	14.2	14.5	14.8	14.6	14.5	14.8	14.6	14.5	14.5
21.1	10.4	11.1	14.0	12.1	12.7	28.5	30.0	30.6	32.3	29.6	30.0	32.5	32.9	33.3	32.5	32.9	33.3	33.3
53.2	55.7	60.0	47.9	50.5	54.7	48.6	51.3	50.5	43.8	46.5	46.4	61.2	60.5	62.3	61.2	60.5	62.3	62.3

¹ Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Article	Unit	Seattle, Wash.				Springfield, Ill.			Washington, D. C.				
		Oct. 15—		Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927	Oct. 15—		Sept. 15, 1927	Oct. 15, 1927
		1913	1926			1913	1926			1913	1926		
Sirloin steak	Pound	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Round steak	do	24.3	33.2	34.8	34.8	36.4	37.1	36.7	27.4	47.2	49.3	48.7	
Rib roast	do	20.7	29.1	30.7	30.6	36.0	36.5	36.1	23.5	40.3	42.8	42.7	
Chuck roast	do	19.3	26.6	28.2	28.0	24.1	24.4	24.6	20.7	34.7	34.9	34.4	
Plate beef	do	16.0	19.5	20.4	20.6	21.3	22.5	22.9	17.3	25.2	25.9	25.6	
Pork chops	do	13.0	15.0	15.4	15.5	14.0	14.5	15.2	12.7	13.8	14.2	14.0	
Bacon, sliced	do	24.3	42.6	40.5	40.2	40.5	35.0	37.1	23.5	45.7	44.2	43.8	
Ham, sliced	do	32.5	61.7	57.3	57.7	49.8	45.8	45.8	27.1	51.6	43.8	44.6	
Lamb, leg of	do	30.0	64.7	59.5	59.3	58.8	49.0	49.6	30.0	61.6	57.2	57.1	
Hens	do	17.7	36.5	35.8	35.7	39.0	38.8	40.6	19.1	40.1	38.5	39.0	
Salmon, canned, red	do	36.6	35.8	35.2	39.0	36.2	36.6	36.6	35.6	33.3	34.0		
Milk, fresh	Quart	9.7	10.3	12.0	12.5	14.4	14.4	9.0	15.0	15.0	15.0	15.0	
Milk, evaporated	15-16 oz. can	10.7	10.6	10.6	11.7	11.6	11.7	12.0	12.0	12.0	11.9		
Butter	Pound	40.0	53.2	53.5	54.4	53.3	51.8	54.1	40.3	57.8	57.2	58.6	
Oleomargarine (all butter substitutes)	do	31.0	26.7	26.4	30.7	28.1	28.7	31.5	27.9	27.8			
Cheese	do	22.7	34.9	35.2	35.2	36.3	36.2	38.1	23.5	38.8	39.9	41.5	
Lard	do	17.1	24.0	20.8	21.2	21.9	18.6	18.8	15.1	21.2	18.6	18.8	
Vegetable lard substitute	do	28.2	27.4	27.1	28.0	27.5	27.5	25.8	24.7	24.2			
Eggs, strictly fresh	Dozen	50.0	59.1	46.4	54.7	47.5	39.8	47.7	36.9	62.8	56.4	63.1	
Eggs, storage	do	46.7	45.0	45.8	45.8	38.8	48.5	48.5	46.3				
Bread	Pound	5.2	9.8	9.7	9.7	10.1	10.3	10.3	5.7	8.8	9.1	9.1	
Flour	do	2.9	5.0	4.8	4.7	5.9	5.5	5.5	3.8	6.4	5.9	5.8	
Corn meal	do	3.3	4.9	5.7	5.7	4.9	4.9	4.9	2.7	5.1	5.2	5.1	
Rolled oats	do	9.0	8.5	8.5	10.3	10.1	10.3	9.2	9.3	9.4			
Corn flakes	8-oz. pkg.	11.5	10.2	10.1	11.5	10.3	10.2	10.8	9.5	9.5			
Wheat cereal	28-oz. pkg.	27.8	27.5	27.6	26.7	27.5	27.5	24.8	24.3	24.5			
Macaroni	Pound	18.2	18.1	18.2	19.3	19.3	19.0	23.8	22.5	22.9			
Rice	do	7.7	12.5	12.4	11.8	11.2	10.9	11.1	9.4	12.8	11.6	11.4	
Beans, Navy	do	10.0	11.5	11.0	8.8	9.5	9.6	8.3	8.8	9.0			
Potatoes	do	1.4	2.6	2.4	2.0	3.9	3.0	2.8	2.0	4.2	3.6	3.5	
Onions	do	3.6	4.0	3.5	4.5	5.8	4.8	5.8	5.8	5.8	5.8	4.7	
Cabbage	do	3.8	4.4	3.6	3.7	3.9	3.8	4.6	4.1	4.2			
Beans, baked	No. 2 cans	12.5	11.6	11.8	10.6	10.4	10.4	10.3	10.2	10.2			
Corn, canned	do	18.6	17.3	17.4	15.2	14.5	14.6	15.5	14.3	14.7			
Peas, canned	do	20.3	18.4	18.5	16.9	16.1	15.9	16.5	15.0	15.6			
Tomatoes, canned	do	17.6	16.4	16.7	13.8	13.6	13.6	11.3	9.8	10.3			
Sugar, granulated	Pound	6.4	7.1	7.2	7.2	7.8	8.0	7.8	5.1	6.8	6.9	6.9	
Tea	do	50.0	81.0	75.7	76.0	82.5	84.6	84.6	37.5	88.7	91.2	92.0	
Coffee	do	28.0	52.8	49.2	53.4	49.7	49.9	28.8	49.2	41.0	42.5		
Prunes	do	15.0	13.2	12.7	17.0	16.0	15.0	18.1	16.3	15.7			
Raisins	do	14.9	13.9	13.6	15.9	15.4	15.0	15.0	14.4	14.2			
Bananas	Dozen	13.5	12.4	12.9	10.5	9.3	10.4	35.3	32.7	33.6			
Oranges	do	51.3	52.6	52.4	57.2	52.3	62.0	63.9	63.2	63.3			

¹ No. 2½ can.² Per pound.

Changes in Retail Food Costs in 51 Cities

TABLE 6 shows for 39 cities the percentage of increase or decrease in the retail cost of food³ in October, 1927, compared with the average cost in the year 1913, in October, 1926, and in September, 1927. For 12 other cities comparisons are given for the one-year and the one-month periods. These cities have been scheduled by the bureau at different dates since 1913. These percentage changes are

³ For list of articles see note 5, p. 173.

based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.⁴

TABLE 6.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN OCTOBER, 1927, COMPARED WITH THE COST IN SEPTEMBER, 1927, OCTOBER, 1926, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percent-age increase, October, 1927, compared with 1913	Percent-age decrease, October, 1927, compared with October, 1926	Percent-age increase, October, 1927, compared with September, 1927	City	Percent-age increase, October, 1927, compared with 1913	Percent-age decrease, October, 1927, compared with October, 1926	Percent-age increase, October, 1927, compared with September, 1927
Atlanta	61.8	2.4	1.7	Minneapolis	51.5	2.8	2.9
Baltimore	63.5	2.3	2.7	Mobile	—	4.3	0.4
Birmingham	61.4	3.3	1.3	Newark	53.8	0.2	2.3
Boston	60.3	0.3	1.8	New Haven	58.6	1.5	2.2
Bridgeport	—	0.8	1.9	New Orleans	54.0	2.0	0.3
Buffalo	60.2	2.6	1.9	New York	65.4	² 0.8	3.3
Butte	—	4.5	¹ 0.7	Norfolk	—	1.3	2.3
Charleston, S. C.	55.9	3.8	0.1	Omaha	48.3	6.1	0.9
Chicago	66.1	3.2	0.8	Peoria	—	3.8	0.2
Cincinnati	58.0	3.5	1.9	Philadelphia	61.5	1.8	2.4
Cleveland	55.5	4.3	0.8	Pittsburgh	60.0	1.3	2.6
Columbus	—	3.5	0.5	Portland, Me.	—	0.9	1.6
Dallas	55.2	0.6	1.1	Portland, Oreg.	41.1	0.3	1.2
Denver	38.8	3.8	1.9	Providence	59.8	1.1	1.5
Detroit	63.4	2.3	0.2	Richmond	63.0	4.3	1.2
Fall River	57.7	² 0.6	2.0	Rochester	—	0.1	3.3
Houston	—	5.0	0.1	St. Louis	50.1	2.8	1.0
Indianapolis	51.9	2.7	2.0	St. Paul	—	3.5	2.3
Jacksonville	49.5	8.4	¹ 0.1	Salt Lake City	34.0	2.4	1.7
Kansas City, Mo.	50.9	3.9	3.0	San Francisco	53.5	1.3	2.2
Little Rock	48.6	2.2	2.2	Savannah	—	3.5	0.7
Los Angeles	44.2	2.8	0.9	Scranton	62.0	0.8	2.1
Louisville	52.9	2.4	2.1	Seattle	44.1	1.3	0.6
Manchester	54.6	1.6	0.3	Springfield, Ill.	—	2.0	1.4
Memphis	46.9	2.7	0.5	Washington, D. C.	65.5	3.3	1.0
Milwaukee	58.0	3.2	1.0				

¹ Decrease.

² Increase.

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of October 99 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 35 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Birmingham, Boston, Bridgeport, Buffalo, Cincinnati, Cleveland, Columbus, Denver, Fall River, Houston, Indianapolis, Kansas City, Mo., Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, Mobile, New Haven, New York, Omaha, Peoria, Pittsburgh, Portland, Me., Portland, Oreg., Richmond, Rochester, St. Louis, St. Paul, Savannah, Scranton, Seattle, and Springfield, Ill.

⁴The consumption figures used from January, 1913, to December, 1920, for each article in each city were given in the November, 1918, issue, pp. 94 and 95. The consumption figures which have been used for each month beginning with January, 1921, were given in the March, 1921, issue, p. 26.

The following summary shows the promptness with which the merchants responded in October, 1927:

RETAIL PRICE REPORTS RECEIVED FOR OCTOBER, 1927

Item	United States	Geographic division				
		North Atlantic	South Atlantic	North Central	South Central	Western
Percentage of reports received.....	99.0	99.1	97.0	99.4	98.0	99.0
Number of cities in each section from which every report was received.....	35	11	3	12	5	4

Retail Prices of Coal in the United States^a

THE following table shows the average retail prices of coal on January 15 and July 15, 1913, October 15, 1926, and September 15 and October 15, 1927, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, OCTOBER 15, 1926, AND SEPTEMBER 15 AND OCTOBER 15, 1927

City, and kind of coal	1913		1926	1927	
	Jan. 15	July 15	Oct. 15	Sept. 15	Oct. 15
United States:					
Pennsylvania anthracite—					
Stove—					
Average price.....	\$7.90	\$7.40	\$15.56	\$15.38	\$15.42
Index (1913=100).....	103.4	96.6	201.4	199.1	199.6
Chestnut—					
Average price.....	\$8.15	\$7.08	\$15.31	\$15.03	\$15.07
Index (1913=100).....	103.0	97.0	193.5	189.9	190.4
Bituminous—					
Average price.....	\$5.48	\$5.39	\$9.59	\$9.20	\$9.33
Index (1913=100).....	190.8	99.2	176.5	169.3	171.7
Atlanta, Ga.: Bituminous.....	\$5.88	\$4.83	\$8.15	\$8.35	\$8.37
Baltimore, Md.: Pennsylvania anthracite—					
Stove.....	17.70	17.24	16.08	16.00	16.00
Chestnut.....	17.93	17.49	15.58	15.25	15.25
Bituminous.....					
Birmingham, Ala.: Bituminous.....	4.23	4.01	7.03	7.49	7.76
Boston, Mass.: Pennsylvania anthracite—					
Stove.....	8.25	7.50	16.40	16.00	16.25
Chestnut.....	8.25	7.75	16.15	15.75	16.00

¹ Per ton of 2,240 pounds.

^a Prices of coal were formerly secured semiannually and published in the March and September issues. Since July, 1920, these prices have been secured and published monthly.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, OCTOBER 15, 1926, AND SEPTEMBER 15 AND OCTOBER 15, 1927—Continued

City, and kind of coal	1913		1926	1927	
	Jan. 15	July 15	Oct. 15	Sept. 15	Oct. 15
Bridgeport, Conn.: Pennsylvania anthracite—				\$15.00	\$14.50
Stove.....				15.00	14.50
Chestnut.....					15.00
Buffalo, N. Y.: Pennsylvania anthracite—	\$6.75	\$6.54	13.75	13.99	13.99
Stove.....	6.90	6.80	13.39	13.59	13.59
Butte, Mont.: Bituminous.....			11.03	10.95	10.96
Charleston, S. C.: Bituminous.....	16.75	16.75	11.00	11.00	11.00
Chicago, Ill.: Pennsylvania anthracite—	8.00	7.80	16.91	16.95	16.94
Stove.....	8.25	8.05	16.72	16.45	16.45
Chestnut.....	4.97	4.65	9.06	9.32	9.30
Cincinnati, Ohio: Bituminous.....	3.50	3.38	8.50	7.08	7.10
Cleveland, Ohio: Pennsylvania anthracite—	7.50	7.25	15.45	15.10	15.17
Stove.....	7.75	7.50	15.05	14.70	14.80
Chestnut.....	4.14	4.14	9.99	8.94	9.02
Columbus, Ohio: Bituminous.....			7.82	7.21	7.22
Dallas, Tex.: Arkansas anthracite—					
Egg.....	8.25	7.21	15.67	15.17	15.33
Bituminous.....			13.33	12.71	12.71
Denver, Colo.: Colorado anthracite—					
Furnace, 1 and 2 mixed.....	8.88	9.00	16.00	16.10	16.10
Stove, 3 and 5 mixed.....	8.50	8.50	16.50	16.10	16.10
Bituminous.....	5.25	4.88	10.79	10.25	10.42
Detroit, Mich.: Pennsylvania anthracite—					
Stove.....	8.00	7.45	16.00	15.00	16.00
Chestnut.....	8.25	7.65	15.50	15.50	15.50
Bituminous.....	5.20	5.20	10.39	9.38	9.38
Fall River, Mass.: Pennsylvania anthracite—					
Stove.....	8.25	7.43	16.75	16.75	16.75
Chestnut.....	8.25	7.61	16.25	16.25	16.25
Houston, Tex.: Bituminous.....			11.50	11.80	12.10
Indianapolis, Ind.: Bituminous.....	3.81	3.70	7.65	7.26	7.45
Jacksonville, Fla.: Bituminous.....	7.50	7.00	14.00	13.00	14.00
Kansas City, Mo.: Arkansas anthracite—					
Furnace.....			14.50	14.00	14.00
Stove No. 4.....			15.67	15.17	15.33
Bituminous.....	4.39	3.94	7.82	7.83	7.75
Little Rock, Ark.: Arkansas anthracite—					
Egg.....			14.00	13.50	13.50
Bituminous.....	6.00	5.33	10.46	10.15	11.80
Los Angeles, Calif.: Bituminous.....	13.52	12.50	15.60	16.25	16.50
Louisville, Ky.: Bituminous.....	4.20	4.00	7.33	7.01	7.30
Manchester, N. H.: Pennsylvania anthracite—					
Stove.....	10.00	8.50	17.50	17.50	17.50
Chestnut.....	10.00	8.50	17.50	17.25	17.25
Memphis, Tenn.: Bituminous.....	4.34	4.22	7.26	8.30	8.26
Milwaukee, Wis.: Pennsylvania anthracite—					
Stove.....	8.00	7.85	16.80	16.65	16.65
Chestnut.....	8.25	8.10	16.65	16.20	16.20
Bituminous.....	6.25	5.71	10.36	9.29	9.47

¹ Per ton of 2,240 pounds.

² Per 10-barrel lot (1,800 pounds).

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, OCTOBER 15, 1926, AND SEPTEMBER 15 AND OCTOBER 15, 1927—Continued

City, and kind of coal	1913		1926		1927	
	Jan. 15	July 15	Oct. 15	Sept. 15	Oct. 15	
Minneapolis, Minn.:						
Pennsylvania anthracite—						
Stove.....	\$9.25	\$9.05	\$18.10	\$18.15	\$18.15	
Chestnut.....	9.50	9.30	17.95	17.70	17.70	
Bituminous.....	5.80	5.79	11.34	11.26	11.09	
Mobile, Ala.:						
Bituminous.....			9.60	9.08	9.29	
Newark, N. J.:						
Pennsylvania anthracite—						
Stove.....	6.50	6.25	14.00	14.00	14.00	
Chestnut.....	6.75	6.50	13.50	13.50	13.50	
New Haven, Conn.:						
Pennsylvania anthracite—						
Stove.....	7.50	6.25	15.35	14.90	15.05	
Chestnut.....	7.50	6.25	15.35	14.90	15.05	
New Orleans, La.:						
Bituminous.....	2 6.06	2 6.06	10.29	9.32	10.29	
New York, N. Y.:						
Pennsylvania anthracite—						
Stove.....	7.07	6.66	14.75	14.33	14.38	
Chestnut.....	7.14	6.80	14.50	14.04	14.08	
Norfolk, Va.:						
Pennsylvania anthracite—						
Stove.....			16.00	15.00	15.00	
Chestnut.....			16.00	15.00	15.00	
Bituminous.....			9.66	8.80	9.07	
Omaha, Nebr.:						
Bituminous.....	6.63	6.13	10.02	10.02	10.52	
Peoria, Ill.:						
Bituminous.....			6.94	6.94	7.13	
Philadelphia, Pa.:						
Pennsylvania anthracite—						
Stove.....	1 7.16	1 6.80	1 15.79	1 15.04	1 15.04	
Chestnut.....	1 7.38	1 7.14	1 15.54	1 14.54	1 14.54	
Pittsburgh, Pa.:						
Pennsylvania anthracite—						
Chestnut.....	1 8.00	1 7.44	15.13	15.00	14.88	
Bituminous.....	2 3.16	2 3.18	5.74	5.76	5.76	
Portland, Me.:						
Pennsylvania anthracite—						
Stove.....			16.80	16.74	16.80	
Chestnut.....			16.80	16.74	16.80	
Portland, Oreg.:						
Bituminous.....	9.70	9.66	13.52	13.64	13.33	
Providence, R. I.:						
Pennsylvania anthracite—						
Stove.....	4 8.25	4 7.50	4 16.25	4 16.25	4 16.25	
Chestnut.....	4 8.25	4 7.75	4 16.00	4 16.00	4 16.00	
Richmond, Va.:						
Pennsylvania anthracite—						
Stove.....	8.00	7.25	16.17	15.67	15.50	
Chestnut.....	8.00	7.25	16.17	15.67	15.50	
Bituminous.....	5.60	4.94	10.96	9.77	9.68	
Rochester, N. Y.:						
Pennsylvania anthracite—						
Stove.....			14.00	14.60	14.60	
Chestnut.....			14.15	14.15	14.15	
St. Louis, Mo.:						
Pennsylvania anthracite—						
Stove.....	8.44	7.74	16.95	16.75	16.90	
Chestnut.....	8.68	7.90	16.70	16.30	16.50	
Bituminous.....	3.36	3.04	6.42	7.57	7.41	
St. Paul, Minn.:						
Pennsylvania anthracite—						
Stove.....	9.20	9.05	18.10	18.15	18.15	
Chestnut.....	9.45	9.30	17.95	17.70	17.70	
Bituminous.....	6.07	6.04	11.63	11.96	11.96	
Salt Lake City, Utah:						
Colorado anthracite—						
Furnace, 1 and 2 mixed.....	11.00	11.50	18.00	18.00	18.00	
Stove, 3 and 5 mixed.....	11.00	11.50	18.00	18.00	18.00	
Bituminous.....	5.64	5.46	8.47	8.34	8.34	

¹ Per ton of 2,240 pounds.

² Per 10-barrel lot (1,800 pounds).

³ Per 25-bushel lot (1,900 pounds).

⁴ The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, OCTOBER 15, 1926, AND SEPTEMBER 15 AND OCTOBER 15, 1927—Continued.

City, and kind of coal	1913		1926		1927	
	Jan. 15	July 15	Oct. 15	Sept. 15	Oct. 15	
San Francisco, Calif.:						
New Mexico anthracite—						
Cerillos egg	\$17.00	\$17.00	\$25.50	\$25.50	\$25.50	
Colorado anthracite—						
Egg	17.00	17.00	25.00	25.00	25.00	
Bituminous	12.00	12.00	16.61	16.63	16.63	
Savannah, Ga.:						
Bituminous			\$12.00	\$11.75	\$11.13	
Scranton, Pa.:						
Pennsylvania anthracite—						
Stove	4.25	4.31	11.00	10.75	10.75	
Chestnut	4.50	4.56	10.67	10.50	10.50	
Seattle, Wash.:						
Bituminous	7.63	7.70	10.35	9.76	10.02	
Springfield, Ill.:						
Bituminous			4.38	4.44	4.44	
Washington, D. C.:						
Pennsylvania anthracite—						
Stove	17.50	17.38	115.88	115.51	115.51	
Chestnut	17.65	17.53	115.53	114.90	114.90	
Bituminous						
Prepared sizes, low volatile			111.92	111.00	111.08	
Prepared sizes, high volatile			18.75	19.00	19.00	
Run of mine, mixed			18.00	17.88	17.88	

¹ Per ton of 2,240 pounds.

² All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

Index Numbers of Wholesale Prices in October, 1927 (Revised Series)

A SLIGHT continued upward movement of wholesale prices is shown for October by information collected in representative markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's revised index number, computed on prices in the year 1926 as the base and including 550 commodities or price series, stands at 97 for October compared with 96.5 for the month before, a rise of one-half of 1 per cent. Compared with October, 1926, however, with an index number of 99.4, a decrease of nearly 2½ per cent is shown.

Farm products declined somewhat from the September price level, due mainly to decreases in corn and cotton. Cattle, eggs, hay, and wool on the other hand averaged higher than in the preceding month.

Foodstuffs rose sharply in price, with increases reported for butter, cheese, fresh and cured meats, coffee, and rye flour. Small increases took place in the groups of hides and leather products and chemicals and drugs.

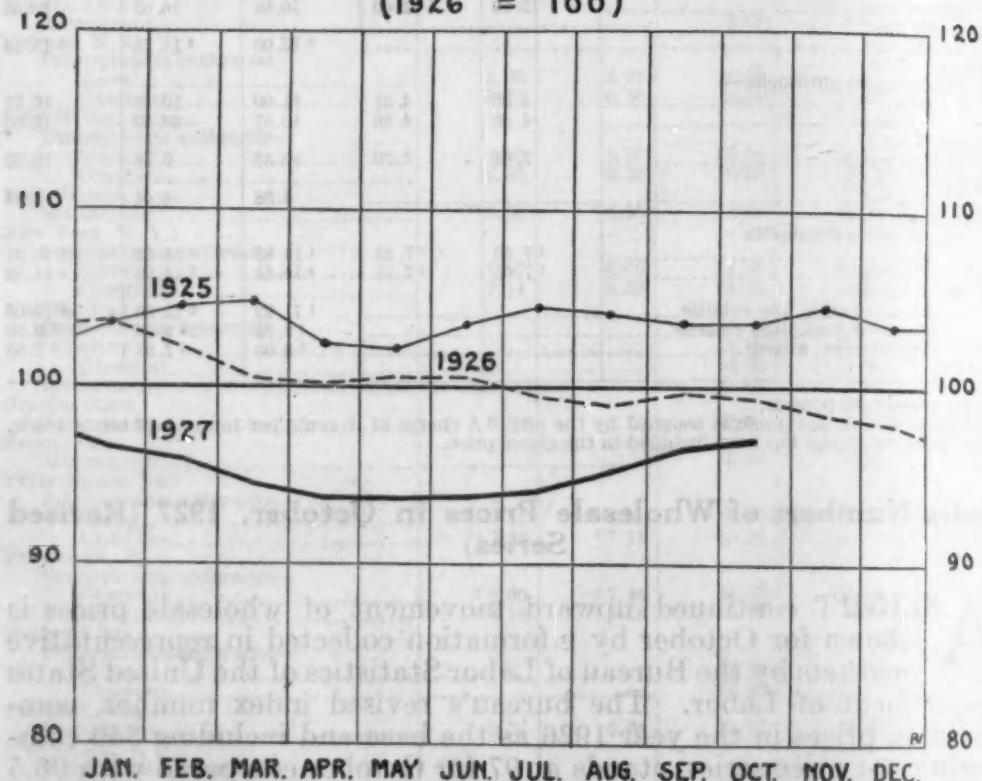
Practically no change in the price level is shown for textile products and house-furnishing goods, while slight decreases are shown for fuel and lighting, metals and metal products, building materials, and miscellaneous commodities.

Of the 550 commodities or price series for which comparable information for September and October was collected, increases were shown in 165 instances and decreases in 139 instances. In 246 instances no change in price was reported.

Comparing prices in October with those of a year ago, as measured by changes in the index numbers, it is seen that farm products and hides and leather products were considerably higher, while textile products were slightly higher. Decreases are shown for all other groups of commodities, ranging from less than 1 per cent in the case of foods and housefurnishing goods, to 8 per cent in the case of building materials, and 17 per cent in the case of fuel and lighting.

TREND OF WHOLESALE PRICES.

(1926 = 100)



INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100]

Group and subgroup	October, 1926	1927		Purchas- ing power of the 1926 dollar in October
		Septem- ber	October	
Farm products.....				Cents
Grains.....	97.9	105.0	105.0	95.2
Livestock and poultry.....	97.4	102.9	99.2	100.8
Other farm products.....	102.2	104.9	105.5	94.8
Foods.....	95.1	107.6	106.7	93.7
Butter, cheese, and milk.....	100.8	90.5	100.0	100.0
Meats.....	102.9	105.6	107.2	93.3
Other foods.....	101.3	92.2	100.0	100.0
	99.7	95.8	97.2	102.9

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES—Continued

Group and subgroup	October, 1926	1927			Purchas- ing power of the 1926 dollar in October
		Septem- ber	October	Cents	
Hides and leather products					
Hides and skins	101.0	112.5	113.0	88.5	
Leather	106.2	128.4	128.0	78.1	
Boots and shoes	99.2	115.4	116.5	85.8	
Other leather products	99.8	105.6	105.6	94.7	
Textile products	100.0	104.9	108.9	91.8	
Cotton goods	97.7	98.5	98.4	101.6	
Silk and rayon	97.3	106.1	106.0	94.3	
Woolen and worsted goods	97.6	86.6	85.4	117.1	
Other textile products	98.3	97.3	98.0	102.0	
Fuel and lighting	99.2	95.9	95.7	104.5	
Anthracite coal	101.3	84.2	83.8	119.3	
Bituminous coal	98.4	96.5	96.0	104.2	
Coke	104.3	102.4	99.6	100.4	
Manufactured gas	96.3	94.0	93.9	106.5	
Petroleum products	99.0	98.2	(1)		
Metals and metal products	100.9	66.4	67.5	148.1	
Iron and steel	101.0	97.6	97.1	103.0	
Nonferrous metals	99.9	94.7	94.0	106.4	
Agricultural implements	100.5	90.7	89.9	111.2	
Automobiles	100.0	99.3	98.9	101.1	
Other metal products	102.3	102.2	102.2	97.8	
Building materials	99.4	100.7	100.7	99.3	
Lumber	99.5	92.1	91.8	109.2	
Brick	98.2	91.0	91.2	109.6	
Cement	97.7	93.2	93.3	107.2	
Structural steel	99.4	96.5	96.5	103.6	
Paint materials	102.1	93.2	91.9	108.8	
Other building materials	101.1	90.0	87.0	114.9	
Chemicals and drugs	100.8	92.3	91.7	109.1	
Chemicals	99.1	96.4	97.1	103.0	
Drugs and pharmaceuticals	99.3	101.4	101.8	98.2	
Fertilizer materials	101.1	86.7	86.2	116.0	
Fertilizers	95.8	92.1	94.1	106.3	
House-furnishing goods	100.0	91.7	92.5	108.1	
Furniture	99.4	98.6	98.5	101.5	
Furnishings	99.5	97.6	97.0	103.1	
Miscellaneous	99.3	99.3	99.4	100.6	
Cattle feed	93.4	89.2	88.3	113.3	
Paper and pulp	93.5	117.7	116.7	85.7	
Rubber	92.1	92.4	91.6	109.2	
Automobile tires	87.7	69.2	70.5	141.8	
Other miscellaneous	91.4	77.4	74.9	133.5	
All commodities	99.8	100.2	99.9	100.1	
	99.4	96.5	97.0	103.1	

¹ Data not yet available.

Wholesale Prices in the United States and in Foreign Countries, 1923 to September, 1927

IN THE following table the more important index numbers of wholesale prices in foreign countries and those of the United States Bureau of Labor Statistics have been brought together in order that the trend of prices in the several countries may be compared. The base periods here shown are those appearing in the sources from which the information has been drawn, in most cases being the year 1913. Only general comparisons can be made from these figures, since, in addition to differences in the base periods, there are important differences in the composition of the index numbers themselves.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES

Country	United States	Canada	Belgium	Bulgaria	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics (revised)	Dominion Bureau of Statistics	Ministry of Industry and Labor	Director General of Statistics	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bachi (revised)
Base period	1926	1913	Apr., 1914	1913	July, 1914	1913	1913	1913	1913	1913
Commodities	560	¹ 238	128	38	69	118	135	45	400	100
Year and month										
1923	100.6	153.0	497	2525	977			410		² 503.9
1924	98.1	155.2	573	2823	997		144	488	137.3	² 497.4
1925	103.5	160.3	558		1008	210	147	550	141.8	² 612.0
1926	100.0	156.2	744		955	163	142	703	134.4	² 618.2
1923										
January	102.2	151.4	434	2657	991			387		516.1
April	104.0	156.9	480	2757	1012			415		525.7
July	98.6	153.5	504	2408	949			407		503.9
October	99.6	153.1	515	2263	960			421		499.6
1924										
January	99.8	156.9	580	2711	974			494		504.4
April	97.6	151.1	555	2798	1008			450		510.3
July	95.9	153.9	566	2737	953			481		497.4
October	98.6	157.0	555	2988	999			497		522.0
1925										
January	103.5	165.5	559	3275	1045	243		514		568.2
February	104.5	164.7	551	3309	1048	240		515		571.1
March	104.8	161.6	546	3272	1034	236		514		571.2
April	102.4	156.5	538	3244	1020	230		513		570.1
May	102.1	158.8	537	3177	1006	227		520		571.2
June	103.4	158.6	552	3225	998	223		543		590.9
July	104.6	158.1	559	3041	1009	212		557		612.0
August	104.2	158.9	567	2870	993	197		557		630.6
September	103.7	156.2	577	2834	996	186		556		621.5
October	103.6	156.0	575	2823	989	179		572		617.1
November	104.5	161.2	569	2822	977	176		605		612.3
December	103.4	163.5	565	2913	977	176		633		613.8
1926										
January	103.6	163.8	560	2901	966	172	143	634	135.8	608.0
February	102.1	162.0	556	2899	950	165	142	636	134.3	603.5
March	100.4	160.0	583	2844	968	158	141	632	133.1	592.3
April	100.1	160.2	621	2774	923	157	141	650	132.7	590.0
May	100.5	156.8	692	2938	928	158	140	688	132.3	595.8
June	100.5	155.6	761	2842	926	157	141	738	131.9	604.9
July	99.5	155.9	876	2838	948	158	141	836	131.3	618.2
August	99.0	154.0	836	2759	963	162	143	769	134.0	632.5
September	99.7	152.5	859	2723	973	162	143	787	134.9	622.0
October	99.4	151.3	856	2716	972	178	143	751	136.2	596.7
November	98.4	151.4	866	2739	978	170	143	684	137.1	594.2
December	97.9	150.5	860	2718	978	158	144	627	137.1	573.6
1927										
January	96.6	150.6	856	2706	979	157	144	622	135.9	558.2
February	96.9	150.1	854	2688	975	156	144	632	135.6	555.8
March	94.5	148.7	858	2649	976	153	143	641	135.0	544.7
April	93.7	148.5	846	2502	979	152	143	636	134.8	521.3
May	93.7	151.9	848	2751	988	152	142	628	137.1	496.2
June	93.8	153.5	851	2823	990	152	144	622	137.9	473.4
July	94.1	152.0	845	2775	992	152	144	620	138.0	466.7
August	95.2	152.3	850	2745	983	153	147	618	137.9	
September	96.5	151.0	837		975	153	148		139.7	

¹ 236 commodities since April, 1924.² July.

WHOLESALE PRICES—U. S. AND FOREIGN COUNTRIES 199

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	Neth- er- lands	Nor- way	Spain	Swe- den	Swit- zer- land	United King- dom	Aus- tralia	New Zeal- and	South Africa	Japan	China	India
	Central Bureau of Sta- tistics	Central Bu- reau of Sta- tistics	Insti- tute of Geog- raphy and Sta- tistics	Cham- ber of Com- merce	Dr. J. Lo- renz	Board of Trade	Bureau of Cen- sus and Sta- tistics	Cen- sus and Sta- tistics (re- vised)	Office of Cen- sus and Sta- tistics	Bank of Japan, Tokyo	Bu- reau of Mar- kets, Tre- asury De- part- ment, Shang- hai	Labor Office, Bom- bay
Computing agency												
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	148	174	74	160	71	150	92	180	187	56	117	42
Year and month												
1923	151	232	172	163	179.9	158.9	170	158	127	190	156.4	181
1924	156	207	183	162	175.7	166.2	165	165	129	206	153.9	182
1925	155	233	188	161	162.9	159.1	162	161	128	202	159.4	163
1926	145	198	181	149	148.2	148.1	161	155	123	179	164.1	149
1923	157	223	170	163	174.7	157.0	163	-----	131	184	152.7	181
January	156	229	174	168	185.9	162.0	167	-----	126	196	157.7	180
April	145	231	170	162	179.8	156.5	180	-----	124	192	155.4	178
July	148	235	171	161	181.1	158.1	171	-----	125	212	156.1	181
1924	166	251	178	161	183.2	165.4	174	-----	131	211	155.8	188
January	154	263	184	161	181.4	164.7	166	-----	126	207	153.7	184
April	151	265	182	157	173.3	162.6	163	-----	125	195	151.5	184
October	161	273	186	167	169.0	170.0	163	-----	133	213	152.8	181
1925	160	279	191	169	170.8	171.1	163	166	130	214	159.9	173
January	158	281	192	169	170.8	168.9	162	162	-----	210	159.2	173
February	155	279	193	168	169.9	166.3	160	162	-----	204	160.3	171
March	151	273	190	163	165.9	161.9	158	162	130	202	159.3	165
April	151	262	191	162	163.0	158.6	159	162	-----	199	157.8	164
May	151	260	187	161	161.9	157.2	162	162	-----	200	157.3	160
June	153	254	188	161	160.6	156.9	162	161	127	198	162.8	158
July	155	249	184	159	159.6	156.2	162	161	-----	200	160.3	160
August	155	237	185	157	159.4	155.1	162	160	-----	201	160.2	157
September	154	223	187	154	159.2	153.9	163	162	124	200	159.0	158
October	154	220	186	155	157.0	152.7	165	161	-----	198	158.4	160
November	155	220	187	156	156.7	152.1	160	160	-----	194	158.1	154
December	153	214	188	153	155.5	151.3	161	159	124	192	164.0	154
1926	149	211	196	152	154.5	148.8	160	159	-----	188	163.0	151
January	145	205	183	149	150.8	144.4	163	157	-----	184	164.4	150
February	143	199	179	150	148.4	143.6	168	156	120	181	162.8	151
March	143	197	179	151	146.6	144.9	167	156	-----	177	159.7	151
April	144	194	177	150	145.1	146.4	163	155	-----	177	155.8	150
May	141	192	178	148	145.0	148.7	162	156	122	179	156.9	149
June	139	193	180	147	145.5	140.1	162	154	-----	177	160.5	148
July	140	193	178	146	146.0	150.9	158	153	-----	176	164.2	149
August	143	198	179	148	145.3	152.1	154	153	127	174	171.1	147
September	147	199	185	148	146.9	152.4	155	151	-----	171	174.4	146
October	147	184	186	150	148.3	146.1	155	153	-----	170	172.0	146
November	145	174	184	146	146.5	143.6	154	151	128	170	172.8	146
December	146	172	180	146	145.4	142.6	153	147	-----	171	172.0	148
1927	144	167	179	145	146.7	140.6	150	147	-----	171	174.7	146
January	143	164	177	143	146.5	139.8	151	147	126	170	173.1	145
February	145	162	172	145	147.1	141.1	152	145	-----	171	171.3	146
March	149	166	171	146	147.2	141.8	155	146	-----	172	169.3	147
April	151	165	168	146	147.0	141.1	161	146	120	170	171.0	147
May	149	167	168	146	147.2	140.9	165	146	-----	167	170.8	148
June	150	167	-----	148	147.8	142.1	170	-----	169	-----	-----	-----

* 52 commodities in 1920; 53 commodities from August, 1920, to December, 1921.

* 147 items.

Relative Importance of Commodities Included in the Revised Index Numbers of Wholesale Prices

In each issue of the annual bulletin on wholesale prices published by the Bureau of Labor Statistics there has appeared a statement (Appendix B) giving for the last completed year the estimated values of the various commodities included in the weighted index numbers, together with the ratio of such values to their respective groups and to all commodities combined. In the following table there is presented information for the 550 commodities included in the revised index numbers for the year 1926. It should be understood that these values and ratios will vary somewhat from year to year, depending on price changes and possible changes in the weighting factors used.

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926

[Revised series]

Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
All commodities	\$44,582,074	100.00	100.00
GROUP I.—FARM PRODUCTS			
(a) Grains	9,413,212	100.00	21.11
Barley, feeding, per bushel, Chicago	1,603,106	17.04	.36
Corn, per bushel, Chicago—	48,931	.52	.11
Contract, grades—			
No. 3, mixed	161,629	1.72	.36
Oats, No. 2, white, per bushel, Chicago	235,031	2.50	.53
Rye, No. 2, per bushel, Chicago	161,519	1.72	.36
Wheat, per bushel—	37,366	.40	.08
No. 2, red winter, Chicago	186,859	1.98	.42
No. 2, hard, Kansas City	246,013	2.61	.55
No. 1, northern spring, Minneapolis	73,387	.78	.17
No. 2, dark northern spring, Minneapolis	221,127	2.35	.50
No. 1, hard white, Portland, Oreg	90,258	.96	.20
No. 2, red winter, St. Louis	140,986	1.50	.32
(b) Livestock and poultry	3,190,079	33.98	7.17
Cattle, per 100 pounds, Chicago—			
Calves, good to choice, vealers	188,220	2.00	.42
Cows—			
Fair to good	128,915	1.37	.29
Good to choice	290,261	3.08	.65
Steers—			
Fair to good	195,982	2.08	.44
Good to choice	426,242	4.53	.96
Hogs, per 100 pounds, Chicago—			
Fair to choice, heavy butchers	380,578	4.04	.85
Fair to choice, light butchers	1,212,512	12.88	2.72
Sheep, per 100 pounds, Chicago—			
Ewes, native, all grades, fair to best	16,701	.18	.04
Lambs, western, fair to good	122,162	1.30	.27
Wethers, fed, poor to best	10,423	.11	.02
Poultry, live fowls, per pound—			
Chicago	103,930	1.10	.23
New York	123,063	1.31	.28
(c) Other farm products	4,611,027	48.98	10.34
Beans, medium, per 100 pounds, New York	45,118	.48	.10
Cotton, middling, per pound—			
Galveston	790,275	8.40	1.77
New Orleans	223,141	2.37	.50
New York	116,211	1.23	.28

RELATIVE VALUE OF COMMODITIES—WHOLESALE PRICES 201

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1920—Continued

Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
GROUP I.—FARM PRODUCTS—Continued			
(e) Other farm products—Continued.			
Eggs, fresh, per dozen—			
Western, Boston.....	\$48,514	0.52	0.11
Firsts, Chicago.....	115,591	1.23	.26
Extra firsts, Cincinnati.....	14,529	.15	.03
Candied, New Orleans.....	13,416	.14	.03
Firsts, New York.....	177,728	1.89	.40
Extra firsts, Philadelphia.....	46,949	.50	.11
No. 1, extras, San Francisco.....	10,946	.18	.04
Fruit—			
Apples, fresh—			
Baldwins, per barrel—			
Chicago.....	29,544	.31	.07
New York.....	45,544	.48	.10
Winesaps, medium grade, per box, Portland, Oreg.....	143,488	1.52	.32
Lemons, choice or fancy, California, per box, Chicago.....	40,616	.43	.09
Oranges, choice, California, per box, Chicago.....	205,047	2.18	.46
Hay, per ton—			
Alfalfa, Kansas City.....	168,333	1.79	.38
Clover, mixed, No. 1, Cincinnati.....	77,141	.82	.17
Timothy, No. 1, Chicago.....	85,094	.90	.19
Hops, prime to choice, Pacific, per pound, Portland, Oreg.....	6,240	.07	.01
Milk, fluid, per 100 pounds—			
Chicago.....	333,930	3.55	.75
New York.....	815,560	8.66	1.83
San Francisco.....	118,804	1.26	.27
Peanuts, per pound, Norfolk.....	25,495	.27	.06
Seeds—			
Alfalfa, per 100 pounds, Kansas City.....	8,221	.00	.02
Clover, per 100 pounds, Chicago.....	16,354	.17	.04
Flaxseed, per bushel, Minneapolis.....	95,712	1.02	.21
Timothy, per 100 pounds, Chicago.....	3,991	.04	.01
Tobacco, leaf, average warehouse sales, per 100 pounds, Kentucky.....	121,353	1.29	.27
Vegetables, fresh—			
Onions, per 100 pounds, Chicago.....	14,834	.16	.03
Potatoes, white, per 100 pounds—			
Boston.....	95,700	1.02	.21
Chicago.....	142,235	1.51	.32
New York.....	82,720	.88	.19
Portland, Oreg.....	59,904	.64	.13
Potatoes, sweet, per $\frac{1}{4}$ bushel, Philadelphia.....	43,670	.46	.10
Wool, per pound, Boston—			
Ohio, grease basis—			
Fine clothing.....	17,468	.19	.04
Fine delaine.....	7,610	.08	.02
Half blood.....	10,039	.11	.02
Medium grades.....	12,412	.13	.03
Territory, scoured—			
Staple, fine and fine medium.....	41,546	.44	.09
Half blood.....	37,769	.40	.08
Foreign—			
Argentine crossbreds, quarter blood, grease basis.....	35,987	.38	.08
Australian, Geelong 56's, scoured basis.....	35,604	.38	.08
Montevideo, one-fourth blood, 50's, grease basis.....	24,554	.26	.06
GROUP II.—FOODS			
(f) Butter, cheese, and milk—			
Butter, creamery, per pound—			
Boston—			
Extra.....	19,395	.15	.04
Firsts.....	65,161	.52	.15
Seconds.....	8,642	.07	.02
Chicago—			
Extra.....	51,726	.41	.12
Extra firsts.....	174,920	1.38	.39
Firsts.....	23,523	.19	.05
Cincinnati, as to score.....	23,503	.19	.05

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926—Continued

Group-and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
GROUP II.—FOODS—Continued			
(a) Butter, cheese, and milk—Continued.			
New Orleans—			
Fancy.....	88,226	0.07	0.02
Choice.....	18,487	.15	.04
New York—			
Extra.....	54,838	.43	.12
Firsts.....	181,027	1.44	.41
Seconds.....	23,986	.19	.05
Philadelphia—			
Extra.....	16,242	.13	.04
Extra firsts.....	55,396	.44	.12
Firsts.....	7,204	.06	.02
St. Louis, extra.....	50,733	.40	.12
San Francisco—			
Extra.....	8,790	.07	.02
Firsts.....	19,671	.15	.04
Cheese, whole milk, per pound—			
Chicago.....	86,258	.68	.19
New York.....	32,493	.26	.07
San Francisco.....	8,316	.06	.02
Milk, condensed, per case, New York.....	57,641	.46	.13
Milk, evaporated, per case, New York.....	124,018	.98	.28
Milk, fluid.....	1,268,294	10.04	(1)
(b) Meats.	4,149,125	32.86	9.31
Beef, fresh carcass, steers, per pound—			
Chicago.....	380,068	3.01	.85
New York.....	790,226	6.26	1.77
Beef, cured, family, per barrel (200 pounds)—			
New York.....	9,537	.08	.02
Lamb, fresh, per pound, Chicago.....	102,912	.82	.23
Mutton, fresh, dressed, per pound, New York.....	28,324	.22	.07
Pork, cured—			
Bacon, per pound, Chicago.....	180,649	1.50	.43
Hams, per pound, Chicago.....	191,958	1.52	.43
Mess, per barrel (200 pounds), New York.....	220,114	1.74	.49
Sides, clear, per pound, Chicago.....	117,916	.94	.27
Sides, rough, per pound, Chicago.....	116,623	.92	.26
Pork, fresh, dressed hogs, per pound, Chicago.....	1,596,733	12.66	3.59
Poultry, per pound, dressed—			
Chicago.....	68,560	.54	.15
New York.....	159,069	1.26	.36
Veal, fresh, good, per pound, Chicago.....	175,436	1.39	.39
(c) Other foods.	6,988,882	48.22	10.54
Beans.	45,118	.36	(1)
Bread, loaf (per pound before baking)—			
Chicago.....	222,083	1.70	.50
Cincinnati.....	31,500	.25	.07
New Orleans.....	30,383	.24	.07
New York.....	433,675	3.43	.97
San Francisco.....	43,349	.34	.10
Cocoa beans, Arriba, per pound, New York.....	70,588	.56	.16
Coffee, Brazilian grades, per pound, New York—			
Rio, No. 7.....	62,405	.49	.14
Santos, No. 4.....	229,390	1.82	.51
Copra, South Sea, per pound, New York.....	19,104	.15	.04
Crackers, soda, per pound, New York.....	161,900	1.28	.36
Eggs.	433,673	3.44	(1)
Fish—			
Cod, pickled, cured, per 100 pounds, Gloucester, Mass.....	4,166	.03	.01
Herring, pickled, per pound, New York.....	6,802	.05	.01
Mackerel, salt, per pound, New York.....	1,509	.01	(1)
Salmon, canned, Alaska, red, per dozen cans, factory.....	82,805	.66	.19
Salmon, smoked, Alaska, per pound, New York.....	2,568	.02	.01
Flour, rye, white, per barrel, Minneapolis.....	8,949	.07	.02

¹ Included in Farm products.² Less than one one-hundredth of 1 per cent.

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926—Continued

Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
GROUP II.—FOODS—Continued			
(f) Other foods—Continued.			
Flour, wheat, per barrel—			
Standard patents, hard winter, Buffalo.....	\$74,581	0.59	0.17
First clears, hard winter, Buffalo.....	23,957	.19	.05
Short patents, winter, Kansas City.....	204,132	1.62	.46
Straights, winter, Kansas City.....	61,409	.40	.14
Standard patents, Minneapolis.....	305,181	2.42	.68
Second patents, Minneapolis.....	98,372	.78	.22
Patents, Portland, Oreg.....	64,869	.51	.15
Short patents, soft winter, St. Louis.....	41,672	.33	.09
Straights, soft winter, St. Louis.....	12,609	.10	.03
Standard patents, soft winter, Toledo.....	42,759	.34	.10
Fruit, canned, per case, New York—			
Peaches, 2½'s.....	34,254	.27	.08
Pineapples, 2½'s.....	31,442	.25	.07
Fruit, dried, per pound, New York—			
Apples, evaporated.....	2,401	.02	.01
Currants, cleaned.....	1,470	.01	(¹)
Prunes, California, 60-70's.....	25,321	.20	.06
Raisins, const, seeded.....	42,528	.34	.10
Fruit, fresh—			
Apples.....	218,576	1.73	(¹)
Bananas, Jamaicas, per bunch, New York.....	119,974	.95	.27
Lemons.....	40,616	.32	(¹)
Oranges.....	205,047	1.62	(¹)
Glucose, 42° mixing, per 100 pounds, New York.....	39,708	.31	.09
Hominy grits, white, per 100 pounds, mill.....	4,616	.04	.01
Lard, prime, contract, per pound, New York.....	269,128	2.13	.60
Meal, corn, per 100 pounds—			
White, mill.....	16,078	.13	.03
Yellow, fancy, Philadelphia.....	27,484	.22	.06
Molasses, New Orleans, fancy, per gallon, New York.....	22,203	.18	.05
Oatmeal, in 90-pound sacks, per 100 pounds, New York.....	28,075	.22	.06
Oleomargarine, standard, uncolored, per pound, Chicago.....	52,209	.41	.12
Oleo oil, extra, per pound, Chicago.....	18,314	.15	.04
Pepper, black, per pound, New York.....	7,778	.06	.02
Rice, head, clean, per pound, New Orleans—			
Blue Rose, medium to good.....	52,721	.42	.12
Honduras, medium to choice.....	15,684	.12	.03
Salt, Chicago—			
American, medium, per barrel (280 pounds).....	56,420	.45	.13
Granulated, per ton.....	27,026	.21	.06
Sugar, per pound, New York—			
Granulated.....	630,514	4.90	1.41
Raw 96°.....	449,653	3.56	1.01
Tallow, edible, per pound, Chicago.....	4,923	.04	.01
Tea, Formosa, fine, per pound, New York.....	35,320	.28	.08
Vegetables, canned, per dozen—			
String beans, New York.....	12,301	.10	.03
Corn, factory.....	30,351	.24	.07
Peas, New York.....	44,923	.36	.10
Tomatoes, New York.....	48,056	.38	.11
Vegetables, fresh—			
Onions.....	14,834	.12	(¹)
Potatoes.....	424,319	3.36	(¹)
Vegetable oils—			
Coconut, crude, per pound, New York.....	45,075	.36	.10
Corn, crude, per pound, New York.....	13,347	.11	.03
Cottonseed, refined, per pound, New York.....	117,799	.93	.26
Olive, per gallon, New York.....	20,176	.16	.05
Peanut, crude, per pound, mill.....	1,490	.01	(¹)
Soya bean, crude, per pound, New York.....	2,739	.02	.01
Vinegar, cider, per gallon, New York.....	14,301	.11	.03

¹ Included in Farm products.² Less than one one-hundredth of 1 per cent.

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926—Continued

		Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
Commodities in group	All commodities				
GROUP III.—HIDES AND LEATHER PRODUCTS					
(a) Hides and skins			\$1,617,944	100.00	3.63
Hides, per pound, Chicago—			343,845	21.25	.77
Country cows—			42,789	2.64	.10
Packers'—			62,210	3.84	.14
Heavy, native steers—			59,195	3.66	.13
Heavy, Texas steers—					
Skins, per pound—					
Calf, No. 1, country, Chicago—			24,028	1.49	.05
Goat, Brazil, first selection, New York—			61,270	3.79	.14
Kip, No. 1, country, Chicago—			10,753	.66	.02
Sheep, packer's, per pelt, Chicago—			83,600	5.17	.19
(b) Leather			369,739	22.85	.83
Chrome calf, B grade, per square foot, Boston—			77,369	4.78	.18
Glazed kid, top grade, per square foot, Boston—			124,571	7.70	.28
Harness, California oak, per pound, general market—			10,057	.62	.02
Side, black, chrome, tanned, B grade, per square foot, Boston—			63,979	3.34	.12
Sole, oak, per pound, Boston—					
In sides—			25,558	1.58	.06
Scoured backs—			31,707	1.96	.07
Sole, union backs, steers, per pound, New York—			46,498	2.87	.10
(c) Boots and shoes, factory			785,328	48.54	1.76
Children's, per pair—					
Child's, gun metal—			8,465	.52	.02
Little boy's, tan, calf, blucher—			23,420	1.45	.05
Misses', gun metal—			24,931	1.54	.06
Youths', tan calf, blucher—			35,208	2.18	.08
Men's, per pair—					
Black, calf, bal—			31,826	1.97	.07
Black, calf, blucher—			72,397	4.47	.16
Black, dress, welt, side leather—			20,678	1.28	.05
Black, vic' kid—			67,872	4.19	.15
Chocolate, elk, blucher—			19,492	1.20	.04
Dress, medium grade—			21,654	1.34	.05
Gun metal, blucher—			29,734	1.84	.07
Mahogany, chrome, bal—			23,270	1.44	.05
Tan, dress, welt, calf—			31,826	1.97	.07
Tan, dress, welt, side leather—			21,813	1.35	.05
Work, medium grade—			23,190	1.43	.05
Women's, per pair—					
Black, kid, dress—			57,682	3.57	.13
Black, kid, McKay sewed—			50,976	3.15	.12
Medium grade—			70,798	4.38	.16
Better grade—			40,356	2.49	.09
Colored calf—			58,764	3.63	.13
Patent leather pump—			50,976	3.15	.11
(d) Other leather products			119,032	7.36	.27
Gloves, per dozen pairs, factory—					
Men's—			29,407	1.82	.07
Women's—			9,170	.57	.02
Harness (composite price), per set—			35,755	2.21	.08
Suitcases (composite price), each—			24,500	1.51	.05
Traveling bags (composite price), each—			20,191	1.25	.05
GROUP IV.—TEXTILE PRODUCTS					
(a) Cotton goods			3,817,398	100.00	8.56
Blankets, colored, per pair, Boston—			1,523,849	39.92	8.42
Denims, Mass., 28-inch, per yard, mill—			24,889	.65	.06
Drillings, brown, per yard, mill—			45,785	1.20	.10
Massachusetts, 30-inch—			23,310	.61	.05
Pepperell, 29-inch—			22,497	.59	.05
Duck, per yard, mill—					
8-ounce, Army—			29,674	.78	.07
Wide, 36-inch—			12,393	.32	.03
Flannel, per yard, mill—					
Colored, 27-inch—			22,719	.60	.05
Unbleached, 33-inch—			31,742	.83	.07

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926—Continued

Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
GROUP IV.—TEXTILE PRODUCTS—Continued			
(a) Cotton goods—Continued.			
Gingham, per yard, mill—			
Amoskeag, 27-inch	\$25,060	0.66	0.06
Security, 32-inch	34,109	.89	.08
Hosiery, per dozen pairs, mill—			
Men's, combed yarn	36,299	.95	.08
Women's, silk mercerized	73,731	1.93	.16
Muslin, bleached, per yard, mill—			
Fruit of the Loom	14,481	.38	.03
Lonsdale	13,069	.34	.03
Rough Rider	12,384	.32	.03
Nainsook, Wamsutta	19,742	.52	.04
Percale, Scouts, 38½-inch, per yard, mill	45,608	1.19	.10
Print cloth, per yard, mill—			
27-inch	17,908	.47	.04
38½-inch	77,911	2.04	.17
Sheeting, bleached, per yard, mill—			
10/4, Pepperell	69,391	1.82	.16
10/4, Wamsutta	190,021	4.98	.43
Sheeting, brown, per yard, mill—			
Indian Head, 36-inch	34,031	.89	.08
4/4, Pepperell	34,059	.89	.08
4/4, Trion	25,808	.68	.06
Thread, 6-cord, 100 yards, per spool, mill	211,975	5.55	.47
Ticking, Amoskeag, 32-inch, per yard, mill	10,420	.27	.02
Underwear, mill—			
Men's shirts and drawers, per dozen garments	35,770	.94	.08
Women's union suits, per dozen	72,808	1.91	.16
Yarn, per pound, mill—			
Carded, white, northern, 10/1 cones	34,288	.90	.08
Carded, white, northern, 22/1 cones	37,928	.99	.09
Carded, single warp, 40/1's, southern spinning	71,736	1.88	.16
Twisted, 20/2's, carded, weaving	45,689	1.20	.10
Twisted, 40/2's, carded, weaving	66,614	1.75	.15
(b) Silk and rayon	684,210	17.92	1.53
Rayon, per pound, New York—			
150 A denier	21,871	.57	.05
150 B denier	20,453	.54	.05
300 A denier	19,373	.51	.04
300 B denier	18,223	.48	.04
Silk, raw, per pound, New York—			
China, steam filature, third category	51,586	1.35	.12
China, double extra, A crack	12,610	.33	.03
Japan, double extra, cracks	196,466	5.15	.44
Japan 13-15	67,123	1.76	.15
Silk, spun, per pound, New York—			
Domestic, 60/1	8,184	.21	.02
Domestic, 60/2	10,404	.27	.02
Imported, 200/2, first quality	7,751	.20	.02
Hosiery, per dozen pairs, mill—			
Women's pure silk	185,214	4.85	.41
Women's artificial silk	20,283	.53	.04
Men's, silk, mercerized top, heel, and toe	44,669	1.17	.10
(c) Woolen and worsted goods	1,105,911	28.97	2.48
Blankets, all wool, 4 to 5 pounds, per pound, mill	9,989	.26	.02
Flannel, No. 6400, 54-inch, per yard, mill	2,866	.08	.01
Overcoating, per yard, mill—			
Heavy	98,925	2.59	.22
Light	147,710	3.87	.33
Suiting, per yard, mill—			
Serge, 116 M. B.	82,771	2.17	.19
Serge, 11-ounce, 56-58-inch	47,002	1.23	.10
Uniform serge, fine grade, 12-ounce	59,667	1.56	.13
Uniform serge, medium grade, 12-ounce	43,305	1.13	.10
Unfinished worsted, 13-ounce	43,462	1.14	.10
Trousering, 2,000 range, cotton warp, 11-ounce, per yard, mill	39,324	1.03	.09
Underwear, men's, mill—			
Shirts and drawers, per dozen garments	21,300	.56	.05
Union suits, per dozen	29,529	.77	.07

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926—Continued

		Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—
			Commodities in group	All commodities
GROUP IV.—TEXTILE PRODUCTS—Continued				
(c) Woolen and worsted goods—Continued.				
Women's dress goods, per yard, mill—				
Broadcloth, 9½-ounce		\$51,167	1.34	0.11
Flannel, 12-ounce		63,218	1.66	.14
Flannel, W. F. D., 54-inch		31,463	.83	.07
French serge, 30-inch		33,639	.88	.08
Serge, 36-inch		19,673	.52	.04
Sicilian cloth, 54-inch		22,671	.59	.05
Yarns, per pound, mill—				
2/32's, Crossbred stock, white		68,701	1.80	.15
2/40's, half-blood, weaving		88,717	2.32	.20
2/50's, fine, weaving		100,812	2.64	.23
(d) Other textile products				
Binder twine, standard, per bale (50 lbs.) mill		503,328	13.19	1.13
Burlap, 10½-ounce, 40 inches, per yard, mill		326,421	8.55	.73
Hemp, manila, per pound, New York		80,625	2.11	.18
Jute, raw, medium grades, per pound, New York		28,566	.75	.06
Linen shoe thread, 10's, Barbour, per pound, New York		13,081	.34	.03
Rope, pure Manila, ½-inch and larger, per pound, New York		6,694	.18	.02
Sisal, Mexican, per pound, New York		24,285	.64	.06
		23,706	.62	.05
GROUP V.—FUEL AND LIGHTING				
(a) Anthracite coal, per gross ton (composite price)		7,163,607	100.00	16.07
Chestnut, f. o. b. city		888,141	12.40	1.99
Egg, f. o. b. city		439,611	6.14	.99
Pea, f. o. b. city		174,501	2.44	.39
		273,930	3.82	.61
(b) Bituminous coal, per net ton (composite price)		2,157,740	30.12	4.84
Mine run, f. o. b. city		1,070,398	14.94	2.40
Prepared sizes, f. o. b. city		832,611	11.62	1.87
Screenings, f. o. b. city		254,731	3.56	.57
(c) Coke, per net ton		407,723	5.69	.92
Beehive—				
Alabama, foundry, oven		11,216	.16	.03
Concordville, furnace, oven		46,980	.66	.10
By-product—				
Alabama, Birmingham		53,263	.74	.12
New Jersey, Newark		296,263	4.13	.67
(d) Manufactured gas, per 1,000 cubic feet (composite price)		368,717	5.15	.83
(e) Petroleum products		3,341,287	46.64	1.49
Petroleum, crude, per barrel, wells—				
California		327,633	4.57	.73
Kansas-Oklahoma		886,345	12.37	1.99
Pennsylvania		142,011	1.98	.32
Fuel oil, refinery—				
Oklahoma, per barrel		272,211	3.80	.61
Pennsylvania, per gallon		339,622	4.74	.76
Gasoline, per gallon, refinery—				
California		229,487	3.20	.51
Oklahoma		178,060	2.49	.40
Pennsylvania		396,636	5.54	.89
North Texas		250,689	3.50	.56
Natural, Oklahoma		85,079	1.19	.19
Kerosene, refined, per gallon—				
Standard, New York		105,561	1.47	.24
Water white, refinery		127,953	1.79	.29
GROUP VI.—METALS AND METAL PRODUCTS				
(a) Iron and steel		5,832,921	100.00	13.98
Iron ore, Mesabi, per gross ton, lower lake ports		2,128,331	36.49	4.77
Bessemer		112,644	1.93	.25
Non-Bessemer		181,335	3.11	.41

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926—Continued

Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
GROUP VI.—METAL AND METAL PRODUCTS—Continued			
(a) Iron and steel—Continued.			
Pig iron, per gross ton—			
Basic, furnace	\$41,826	0.72	0.09
Bessemer, Pittsburgh	12,684	.22	.03
Foundry No. 2, northern, Pittsburgh	54,776	.94	.12
Foundry No. 2, southern, Birmingham	56,206	.96	.13
Ferromanganese, furnace	29,586	.51	.07
Spiegeleisen, furnace	3,985	.07	.01
Bar iron, per pound—			
Best refined, Philadelphia	10,298	.18	.02
Common, refined, Pittsburgh	10,508	.18	.02
Bars, concrete reinforcing, $\frac{3}{4}$ -inch and larger, per 100 pounds, mill	28,220	.48	.06
Nails, wire, per 100 pounds, Pittsburgh	45,551	.78	.10
Pipe, cast-iron, 6-inch, per net ton, New York	99,908	1.71	.22
Pipe, black steel, per 100 feet, Pittsburgh	76,980	1.32	.17
Skelp, grooved, per 100 pounds, Pittsburgh	22,697	.39	.05
Steel billets, open-hearth, per gross ton, Pittsburgh	171,465	2.94	.39
Steel merchant bars, per 100 pounds, Pittsburgh	214,957	3.69	.48
Steel plates, tank, per pound, Pittsburgh	167,611	2.87	.38
Steel rails, open-hearth, per gross ton, mill	120,486	2.07	.27
Steel scrap, per gross ton, Chicago	21,219	.36	.05
Steel sheets, No. 27, box annealed, per pound, mill	185,592	3.18	.42
Steel, structural, per 100 pounds, mill	148,868	2.55	.33
Terne plate, No. 8, I. C., package, per 200 pounds, mill	12,285	.21	.03
Tinplate, domestic, standard, coke, per 100 pounds, Pittsburgh	182,589	3.13	.41
Wire, fence—			
Barbed, galvanized, per 100 pounds, mill	17,265	.30	.04
Galvanized, No. 9, per 100 pounds, Pittsburgh	14,514	.25	.03
Plain, annealed, per 100 pounds, Pittsburgh	43,235	.74	.10
Woven, per 100 rods, Pittsburgh	41,041	.70	.09
(b) Nonferrous metals	935,332	16.03	2.10
Aluminum, per pound, New York	62,956	1.08	.14
Antimony, per pound, New York	3,397	.06	.01
Brass sheets, per pound, mill	65,147	1.12	.15
Copper, ingot, electrolytic, per pound, refinery	304,473	5.22	.68
Copper, sheet, hot rolled, per pound, New York	32,213	.55	.07
Copper wire, bare, per pound, mill	75,300	1.20	.17
Lead, pig, desilverized, per pound, New York	119,199	2.04	.27
Lead pipe, per 100 pounds, New York	10,234	.18	.02
Nickel, ingot, per pound, New York	11,218	.19	.02
Quicksilver, per pound, New York	2,564	.04	.01
Silver, bar, fine, per ounce, New York	43,542	.75	.10
Tin, pig, straits, per pound, New York	111,491	1.91	.25
Zinc, sheet, per 100 pounds, La Salle, Ill.	13,449	.23	.03
Zinc, pig, slab, per pound, New York	80,059	1.37	.18
(c) Agricultural implements, factory	93,652	1.61	.21
Binder, grain, each	5,486	.09	.01
Cultivator, each	5,786	.10	.01
Drill, grain, each	2,567	.04	.01
Engine, 3-horsepower, each	9,196	.16	.02
Harrow, each—			
Spike, peg-tooth	3,260	.06	.01
Spring-tooth	2,336	.04	.01
Loader, hay, each	1,620	.08	(?)
Mower, hay, each	5,559	.10	.01
Picker, corn, each	1,625	.03	(?)
Planter, corn, each	2,251	.04	.01
Plow, tractor, each	5,643	.10	.01
Plow, walking—			
1-horse (composite price), each	1,224	.02	(?)
2-horse (composite price), each	2,978	.05	.01
Rake, each—			
Self-dump	1,347	.02	(?)
Side-delivery	1,254	.02	(?)
Separator, cream, each	9,321	.16	.02
Sheller, corn, each	80	(?)	(?)
Spreader, manure, each	5,244	.09	.01
Tractor, each	15,640	.27	.04
Wagon, 2-horse, each	11,235	.19	.03

¹ Less than one one-hundredth of 1 per cent.

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926—Continued

Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
GROUP VI.—METALS AND METAL PRODUCTS—Continued			
(d) Automobiles, each, factory (composite price)	\$2,388,248	40.94	5.36
Buick	548,903	9.41	1.23
Cadillac	93,269	1.60	.21
Chevrolet	493,985	8.47	1.11
Dodge	323,710	5.55	.73
Ford	823,907	14.12	1.85
Packard	104,384	1.70	.23
(e) Other metal products	287,358	4.93	.64
Sewing machines (composite price), each—			
Electric	38,077	.65	.08
Treadle	25,322	.44	.06
Stoves, cooking (composite price), each—			
Coal	64,252	1.10	.14
Gas	87,905	1.51	.20
Oil	71,802	1.23	.16
GROUP VII.—BUILDING MATERIALS			
(a) Lumber	2,836,860	100.00	5.15
Cypress, shop, per 1,000 feet, St. Louis	1,156,615	40.77	2.59
Douglas fir, per 1,000 feet, mill—	41,974	1.48	.09
No. 1, common sheathing	101,071	3.56	.23
No. 2 and better, drop siding	68,510	2.42	.15
Gum, plain, sap, per 1,000 feet, St. Louis	58,550	2.06	.13
Hemlock, northern, No. 1, per 1,000 feet, Chicago	68,435	2.41	.15
Maple, hard, No. 1, per 1,000 feet, Chicago	49,104	1.73	.11
Oak, plain, white, No. 1, per 1,000 feet, Cincinnati	137,188	4.84	.31
Pine, white, No. 2, per 1,000 feet, Buffalo	77,410	2.73	.17
Pine, yellow, flooring, per 1,000 feet, mill	221,486	7.81	.50
Pine, yellow, timbers, per 1,000 feet, mill	227,746	8.03	.51
Poplar, No. 1, per 1,000 feet, Cincinnati	20,167	.71	.05
Spruce, eastern, per 1,000 feet, Boston	24,926	.88	.06
Lath, per 1,000—			
Douglas fir, No. 1, Chicago	15,169	.53	.06
Pine, yellow, No. 1, mill	14,873	.52	.03
Shingles, per 1,000, mill—			
Cypress	5,382	.19	.01
Cedar, red	24,618	.87	.06
(b) Brick, per 1,000	235,154	8.29	.53
Common, building, plant (composite price)	103,286	3.64	.23
Brick, front, New York	107,735	3.80	.24
Brick, sand, lime, plant	3,138	.11	.01
Paving blocks, 3½-inch, St. Louis	20,905	.74	.05
(c) Cement, Portland, per barrel, plant (composite price)	260,803	9.19	.59
(d) Structural steel	148,868	5.25	(?)
(e) Paint materials	289,864	10.22	.65
Barytes, western, per ton, New York	8,024	.28	.02
Bone black, powdered, per pound, New York	3,167	.11	.01
Copal gum, manila, per pound, mill	3,624	.11	.01
Lamp black, velvet, per pound, New York	1,517	.05	(?)
Linseed oil, raw, per pound, New York	78,394	2.76	.17
Litharge, commercial, per 100 pounds, New York	17,313	.61	.04
Lithopone, domestic, per pound, New York	13,430	.47	.03
Putty, commercial, per pound, New York	3,845	.14	.01
Red lead, dry, per 100 pounds, New York	8,079	.32	.02
Rosin, B grade, per barrel, New York	42,787	1.51	.10
Shellac, T. N., per pound, New York	14,582	.52	.03
Turpentine, southern, per gallon, New York	26,643	.94	.06
White lead, in oil, per pound, New York	44,302	1.56	.10
Zinc oxide, leaded grades, per pound, New York	23,848	.84	.05
(f) Other building materials	745,556	26.28	.79
Asphalt, bulk, per ton, refinery	40,860	1.44	.09
Crushed stone, 1½-inch, per cubic yard, New York	80,736	2.85	.18

^a Less than one one-hundredth of 1 per cent.

^b Included with Metals and metal products.

RELATIVE VALUE OF COMMODITIES—WHOLESALE PRICES 209

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926—Continued

Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
GROUP VII.—BUILDING MATERIALS—Continued			
(f) Other building materials—Continued.			
Glass, plate, per square foot, New York—			
3 to 5 square feet.....	\$21,096	.74	.05
5 to 10 square feet.....	25,333	.80	.06
Glass, window, per 50 square feet, works—			
Single A.....	21,009	.74	.05
Single B.....	16,754	.59	.04
Gravel, building, per ton, plant (composite price).....	54,386	1.92	.12
Hollow tile, building, per block, Chicago.....	35,763	1.26	.08
Lime, building, per ton, plant (composite price).....	10,870	.38	.02
Lime, hydrated, per ton, plant (composite price).....	10,673	.38	.02
Sand, building, per ton, plant (composite price).....	26,832	.95	.06
Slate, roofing, sea green, per 100 square feet, quarry.....	7,014	.25	.02
Copper, sheet.....	32,213	1.14	(¹)
Copper, wire.....	75,390	2.66	(¹)
Nails, wire.....	45,551	1.61	(¹)
Pipe, cast-iron.....	99,908	3.52	(¹)
Pipe, lead.....	10,234	.36	(¹)
Pipe, black steel.....	76,980	2.71	(¹)
Reinforcing bars.....	28,220	.99	(¹)
Terneplate.....	12,285	.43	(¹)
Zinc, sheet.....	13,449	.47	(¹)
GROUP VIII.—CHEMICALS AND DRUGS			
(g) Chemicals—	862,613	100.00	1.75
Acid, New York—	476,782	55.28	.89
Acetic, 28 per cent, per 100 pounds.....	1,978	.23	(¹)
Boric, per pound.....	1,483	.17	(¹)
Carbonic, per pound.....	3,295	.38	.01
Muriatic, 20°, works, per 100 pounds.....	2,860	.33	.01
Nitric, 42°, per 100 pounds.....	3,116	.36	.01
Oleic, distilled, per pound.....	5,275	.61	.01
Salicylic, U. S. P., New York, per pound.....	1,586	.18	(¹)
Stearic, triple-pressed, per pound.....	3,436	.40	.01
Sulphuric, 60°, per ton.....	66,224	7.68	.15
Alcohol, per gallon, New York—			
Denatured.....	25,582	2.97	.06
Wood, refined.....	3,623	.42	.01
Aluminum sulphate, commercial, per 100 pounds, New York.....	7,841	.91	.02
Ammonia, anhydrous, per pound, New York.....	3,633	.42	.01
Anilin oil, per pound, New York.....	2,285	.26	.01
Arsenic, white, powdered, per pound, New York.....	1,596	.19	(¹)
Benzine, pure, per gallon, works.....	4,873	.56	.01
Bleaching powder, per 100 pounds, works.....	5,084	.59	.01
Borax, crystals, per pound, New York.....	5,009	.58	.01
Calcium arsenate, per pound, New York.....	1,040	.12	(¹)
Calcium chloride, 73-75 per cent, per ton, New York.....	2,982	.35	.01
Caustic potash, 88-92 per cent, per pound, New York.....	824	.10	(¹)
Coal-tar colors, per pound, New York—			
Black, direct.....	6,385	.74	.01
Brown, sulphur.....	4,844	.56	.01
Indigo, paste.....	4,609	.53	.01
Jet, nigrosine.....	5,835	.68	.01
Copper, sulphate, per 100 pounds, New York.....	1,784	.21	(¹)
Copperas, per ton, works.....	770	.09	(¹)
Copra.....	19,104	2.21	(¹)
Creosote oil, grade 1, per gallon, works.....	16,289	1.89	.04
Formaldehyde, per pound, New York.....	2,038	.24	.01
Lime, acetate, per 100 pounds, New York.....	4,830	.56	.01
Naphthalene flake, per pound, New York.....	3,351	.30	.01
Sal soda, per 100 pounds, New York.....	1,376	.16	(¹)
Salt cake, ground, per ton, works.....	2,880	.33	.01
Soda ash, light, 58 per cent, per 100 pounds, New York.....	60,195	6.98	.14
Soda, bicarbonate, per 100 pounds, works.....	5,108	.59	.01
Soda, caustic, per 100 pounds, New York.....	36,762	4.26	.08
Sodium silicate, 40°, per 100 pounds, works.....	5,663	.66	.01
Sulphur, crude, per ton, mines.....	31,670	3.67	.07
Tallow, packers' prime, per pound, Chicago.....	33,717	3.91	.08
Toluene, pure, per gallon, works.....	1,362	.16	(¹)

¹ Less than one one-hundredth of 1 per cent.

² Included with Metals and metal products.

* Included with Foods.

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1926—Continued

Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
GROUP VIII.—CHEMICALS AND DRUGS—Continued			
(a) Chemicals —Continued			
Vegetable oils, per pound—			
Coconut.....	\$45,075	5.23	(f)
Corn.....	13,347	1.55	(f)
Palm, niger, New York.....	10,720	1.24	.02
Palm, kernel, crude, New York.....	2,704	.31	.01
Soy bean.....	2,739	.32	(f)
(b) Drugs and pharmaceuticals	117,068	13.57	.26
Acid, New York—			
Citric, domestic, per pound, crystals.....	3,205	.37	.01
Tartaric, per pound, crystals.....	2,533	.30	.01
Alcohol, grain, per gallon, New York.....	54,114	6.27	.12
Camphor, Japanese, refined, slabs, per pound, New York.....	4,850	.56	.01
Castor oil, medicinal, per pound, New York.....	5,201	.61	.01
Cream of tartar, powdered, per pound, New York.....	1,561	.18	(f)
Epsom salts, U.S.P., 100 pounds, New York.....	1,371	.16	(f)
Glycerine, chemically pure, per pound, New York.....	23,543	2.73	.05
Menthol, imported, per pound, New York.....	1,245	.15	(f)
Opium, U.S.P., per pound, New York.....	1,284	.15	(f)
Peroxide of hydrogen, U.S.P., per gross, 4-ounce bottles, New York.....	7,079	.82	.02
Phenol, U.S.P., per pound, New York.....	1,315	.15	(f)
Quinine, sulphate, domestic, per ounce, New York.....	1,745	.20	.01
Soda phosphate, commercial, per pound, New York.....	3,870	.45	.01
Zinc chloride, granular, per pound, New York.....	4,062	.47	.01
(c) Fertilizer materials	145,045	16.81	.32
Acid phosphate, per ton, Baltimore.....	25,189	2.92	.05
Bones, ground, per ton, Chicago.....	4,323	.50	.01
Kainit, 12.4 per cent, per ton, New York.....	1,625	.19	(f)
Manure salts, 20 per cent, per ton, New York.....	4,312	.50	.01
Muritate of potash, 80-85 per cent, per ton, New York.....	7,375	.85	.02
Nitrate of soda, 95 per cent, per 100 pounds, New York.....	57,223	6.63	.13
Phosphate rock, Florida land pebble, per ton, mines.....	11,428	1.32	.02
Sulphate of ammonia, per 100 pounds, New York.....	25,767	2.99	.06
Sulphate of potash, 90-95 per cent, per ton, New York.....	3,408	.40	.01
Tankage, per ton, Chicago.....	4,305	.51	.01
(d) Fertilizer, mixed, per ton (composite price)	123,718	14.34	.28
New England.....	5,971	.60	.01
Middle West.....	10,737	1.25	.03
South Central and Southwest.....	16,418	1.90	.04
Middle Atlantic.....	30,125	3.49	.07
South Atlantic, 8-3-3.....	32,526	3.77	.07
South Atlantic, other.....	27,941	3.24	.06
GROUP IX.—HOUSE-FURNISHING GOODS			
(a) Furniture, factory (composite price)	1,446,819	100.00	1.92
Bedroom, each—	533,202	36.85	1.20
Beds.....	33,242	2.30	.07
Chairs.....	7,382	.51	.02
Dressers and vanities.....	96,931	6.70	.22
Rockers.....	7,357	.51	.02
Dining room—			
Buffets, china cabinets, and servers, each.....	28,865	1.99	.06
Chairs, set of six.....	48,172	3.33	.11
Tables, each.....	25,856	1.79	.06
Kitchen—			
Cabinets, each.....	19,556	1.35	.04
Chairs, per dozen.....	4,967	.34	.01
Refrigerators, each.....	57,664	3.99	.13
Tables, each.....	4,817	.33	.01
Living room, each—			
Chairs.....	80,546	5.98	.19
Davenports.....	42,459	2.93	.10
Tables.....	69,388	4.80	.16
(b) Furnishings	913,617	63.15	.73
Blankets—			
Cotton.....	24,889	1.72	(f)
Wool.....	9,969	.60	(f)

(f) Less than one one-hundredth of 1 per cent.

(g) Included with Textile products.

(h) Included with Foods.

RELATIVE IMPORTANCE OF COMMODITIES AS MEASURED BY THEIR ESTIMATED WHOLESALE VALUES IN EXCHANGE, 1920—Continued

Group and commodity	Estimated value in exchange (000 omitted)	Value expressed as percentage of aggregate value of—	
		Commodities in group	All commodities
GROUP IX.—HOUSE-FURNISHING GOODS—Continued			
(b) Furnishings —Continued.			
Carpets, per yard, factory—			
Axminster	\$106,829	7.38	0.22
Brussels	34,225	2.36	.08
Wilton	72,428	5.01	.16
Cutlery, factory—			
Carvers, per pair	1,287	.09	(2)
Knives and forks, per gross	3,600	.25	.01
Pails, galvanized iron, per gross, factory	2,409	.17	.01
Sheeting, 10/4—			
Pepperell	69,391	4.80	(2)
Wamsutta	190,021	13.13	(2)
Tableware, factory—			
Dinner sets, 100-piece, semivitreous, per set	10,486	.72	.02
Dinner sets, 104-piece, vitreous, per set	24,130	1.67	.05
Nappies, glass, 4-inch, common, per dozen	3,723	.26	.01
Pitchers, glass, $\frac{1}{2}$ gallon, common, per dozen	39,870	2.76	.09
Tumblers, $\frac{1}{2}$ pint, per dozen	8,391	.58	.02
Plates, white granite, per dozen	4,312	.30	.01
Tea cups and saucers, white granite, per dozen	5,523	.38	.01
Ticking, Amoskeag	10,420	.72	(2)
Tubs, galvanized iron, per dozen, factory	4,336	.30	.01
Sewing machines	63,399	4.38	(2)
Stoves, cooking—			
Coal	64,252	4.44	(2)
Gas	87,905	6.08	(2)
Oil	71,802	4.96	(2)
GROUP X.—MISCELLANEOUS			
(a) Cattle feed			
Bran, per ton, Minneapolis	189,980	6.71	.43
Cottonseed meal, prime, per ton, Memphis	52,424	1.85	.12
Linseed meal, per ton, New York	51,603	1.82	.12
Middlings, standard, per ton, Minneapolis	32,743	1.16	.07
53,210	1.88	.12	
	750,383	26.84	1.70
(b) Paper and pulp			
Boxboard, per ton, mill—			
Chip	40,139	1.42	.09
Manila lined chip	50,334	1.78	.11
85-pound test liner	63,075	2.23	.14
Paper—			
Newsprint, rolls, contract, per 100 pounds, mills	198,087	7.00	.44
Wrapping, manila, No. 1, jute, per 100 pounds, New York	279,574	9.88	.63
Wood pulp—			
Mechanical, No. 1, domestic, per ton, mill	18,552	.66	.04
Sulphite, domestic, unbleached, news grade, per 100 pounds, New York	109,622	3.87	.25
	356,630	12.61	.80
(c) Rubber, crude, per pound, New York			
Para, island, fine	11,074	.50	.03
Plantation, ribbed, smoked sheets	342,556	12.11	.77
	381,629	12.61	.80
(d) Automobile tires, factory (composite price), each			
Balloon	764,955	27.03	1.72
Cord	381,177	13.47	.86
Fabric	292,111	10.32	.65
	91,667	3.24	.21
(e) Other miscellaneous			
Cylinder oil, per gallon, refinery—	758,663	26.81	1.70
Oklahoma	56,422	1.99	.13
Pennsylvania	82,814	2.93	.19
Neutral oil, per gallon, refinery—			
Gulf coast	40,310	1.42	.09
Pennsylvania	87,704	3.10	.20
Soap, laundry, per 100 cakes—			
Cincinnati	65,306	2.31	.14
Philadelphia	70,893	2.51	.16
Starch, laundry, per pound, New York	51,220	1.81	.11
Tobacco, New York—			
Plug, per pound	80,825	2.86	.18
Smoking, 1-ounce bags, per gross	223,109	7.88	.50

² Less than one one-hundredth of 1 per cent.³ Included with Metals and metal products.¹ Included with Textile products.

COST OF LIVING

Family Budget of a Skilled Worker in Moscow, Russia¹

DURING the first quarter of 1927 the Moscow office of labor statistics carried out an inquiry into the family budgets of skilled workers in Moscow.² The inquiry covered 98 working-class families, including 455 persons, each family having on an average 4.5 members, 3 being adult members. The following table shows the main items of monthly income and expenditure in chervonetz roubles:

AVERAGE MONTHLY INCOME AND EXPENDITURE OF A SKILLED WORKER'S FAMILY IN MOSCOW, FIRST QUARTER OF 1927

[Exchange rate of chervonetz rouble, first quarter 1927=51.5 cents]

Income and expenditure	Per family		Per adult member of family	
	Chervonetz roubles	United States currency	Chervonetz roubles	United States currency
Income				
Head of family:				
Wage.....	91.17	\$46.95	30.41	\$15.66
Other income.....	3.53	1.82	1.18	.61
Other members of family:				
Wage.....	24.92	12.83	8.31	4.28
Other income.....	3.31	1.70	1.11	.57
Credit, loans, sale of articles.....	13.23	6.81	4.41	2.27
Miscellaneous.....	6.86	3.53	2.29	1.18
Total.....	143.02	73.66	47.71	24.57
Expenditure				
Housing, heating, and lighting.....	12.50	6.44	4.17	2.15
Food.....	59.10	30.43	19.72	10.16
Drink and tobacco.....	6.01	3.09	2.01	1.03
Clothing.....	29.37	15.12	9.80	5.05
Toilet articles.....	1.41	.72	.47	.24
Books, theaters, concerts, and cinemas.....	3.50	1.80	1.17	.60
Expenses for trade-union and the Communist Party.....	3.16	1.63	1.04	.54
Repayment of loans and advances, redemption of pawned articles, etc.....	8.83	4.55	2.94	1.51
Purchases and various expenditures.....	19.14	9.86	6.39	3.29
Total.....	143.02	73.66	47.71	24.57

An analysis of the above figures shows that the earnings of the head of the family constitute about 64 per cent, and those of the members of the family 16 per cent of the total income of a skilled worker's family. Credit and loans plus the proceeds of pawning or selling articles represent from 9 to 10 per cent of the total income. Food is the largest item of expenditure, accounting for 44.7 per cent; to this must be added the cost of spirits and tobacco, which represents 4.5 per cent, making in all about half the total expenditure. Clothing calls for 22.2 per cent and housing, including heating and lighting, 9.5 per cent of the expenditure of a working-class family. The cost of education, including cinemas and theaters, represents about 2.7 per cent, and toilet accessories 1.1 per cent of the total budget. Finally, 6 per cent of the expenditure consists of the repayment of loans and credits granted by private individuals and distributive cooperative societies.

¹ Reprinted from International Labor Office, Industrial and Labor Information, Geneva, Oct. 24, 1927, p. 110.

² Moscow Labor Statistics, May, 1927.

IMMIGRATION AND EMIGRATION LABOR AWARDS AND DECISIONS

Award of the Railroad Train Service Board of Adjustment for the Eastern Region

A CASE of time lost by reason of the cancellation of assignment came before the train service board of adjustment for the eastern region and was decided October 19, 1927, in Docket No. 381. An interdivision freight train on the Boston & Maine Railroad, running between East Deerfield and Salem, Mass., was canceled for four days because no tonnage was available. The west-bound tonnage was moved at the eastern end from Salem to Ayer by a spare crew. The regular crew claimed payment for time lost by reason of the cancellation of this assignment.

Rule 44 of the trainmen's agreement reads in part as follows:

* * * or a regular run is canceled for more than 2 days in any 21-day period (exclusive of holidays), the men so affected will have first right to it, or may within 10 days claim run held by their junior in rank.

The committee representing the men contended "that instead of canceling the regular crew of this train for the round trip that they should have been deadheaded from East Deerfield to Salem to protect the return trip of their regular run, but as this was not done and a spare crew was run out of Salem approximately on the time of QE-3, handling QE-3 train, that * * * crew should be paid for time as claimed by them."

The position of the management was as follows:

It is not the invariable practice to deadhead a train or engine crew to the away-from-home terminal to cover the return trip of a one-way run when the trip out of the home terminal is canceled, although it has been done occasionally. In this case * * * there was no extra crew called to handle westbound cars from Salem to East Deerfield, but an extra crew was called Salem to Ayer, which returned light from Ayer in each case. * * * To agree with contention of committee would prevent the management from taking full advantage of a temporary falling off in traffic to conduct the business economically and would result in paying men for service not performed.

The board, however, sustained the claim.

IMMIGRATION AND EMIGRATION

Statistics of Immigration for September, 1927

By J. J. KUNNA, CHIEF STATISTICIAN UNITED STATES BUREAU OF IMMIGRATION

A RECORD number of Americans returned from abroad during September, 1927, and the women outnumbered the men among these tourists. At New York, the principal port of landing for arrivals from Europe, 62,640 United States citizens arrived this month, 34,210 being females and 28,430 males. Women also were in the majority among the alien residents of the United States reentering the country after a temporary sojourn abroad. During September, 19,534 nonimmigrant aliens were admitted at New York, of whom 10,203 were females; nearly four-fifths of these females were returning to their homes in this country after a visit to their native land.

The principal ports of embarkation of the passengers landing at New York in September, 1927, were Cherbourg, Southampton, Havre, Bremen, Liverpool, Hamburg, Gothenburg, Queenstown, Glasgow, and Naples. Less than one-half of the 34,256 aliens were cabin passengers, 6,450, or 18.8 per cent of the total, coming first-cabin, and 8,736, or 25.5 per cent, second-cabin, while 19,070, or 55.7 per cent, came overseas as third-class or steerage passengers. Of the 62,640 citizens arriving, 25,117, or 40.1 per cent, came as first-class passengers, 16,543, or 26.4 per cent, second-cabin, and 20,980, or 33.5 per cent, third-class or steerage. Children under 16 years of age among the aliens numbered 3,134, and among the citizens, 7,805.

At this season of the year aliens of the nonimmigrant class arriving by water far outnumbered the immigrant. In September, 1927, at the seaports of entry 24,797 aliens were admitted either after a short stay abroad or for a visit in the United States, as against 16,635 immigrants or newcomers for an indefinite period of residence of more than a year in this country.

During September, 1927, a total of 31,000 immigrant aliens were admitted at all ports, 14,122 coming from Europe, principally Germany and the Irish Free State; 16,185 from the Americas, mainly Canada and Mexico; 527 from Asia, and 166 from Africa, Australia, and the Pacific islands. The principal races among these immigrants were: Mexican (4,797), English (4,414), Irish (4,318), German (4,082), Scotch (2,709), French (2,475), Scandinavian (1,869), Italian (1,531), and Hebrew (1,136). Of the total immigrants admitted this month, 16,116 are males and 14,884 females; 5,047 are under 16 years of age, 23,232 range in age from 16 to 44 years, and 2,721 are 45 years of age and over.

In the same month 7,625 emigrant aliens left the country to make their homes abroad again, the largest single group (2,217) going to

Italy. The bulk of these departures are male wage-earners in the prime of life, 5,486 of the total being recorded as males and 5,249 as from 16 to 44 years of age.

TABLE 1.—INWARD AND OUTWARD PASSENGER MOVEMENT DURING JULY, AUGUST, AND SEPTEMBER, 1927

Period	Inward						Aliens de- barred from enter- ing ¹	Outward						Aliens de- ported after land- ing ²		
	Aliens admitted			United States citi- zens ar- rived	Total			Aliens departed			United States citi- zens de- parted	Total				
	Immi- grant	Non- immigrant	Total					Emi- grant ³	Non- emi- grant ³	Total ³						
1927																
July	23,420	15,973	39,393	26,935	69,328	2,002	9,230	18,500	27,739	65,686	93,425	700				
August	28,418	19,011	47,429	57,701	105,130	1,574	6,322	17,014	23,336	43,039	66,375	1,346				
September	31,000	25,619	56,619	75,557	132,176	1,600	7,625	16,885	24,510	39,748	64,258	901				
Total	82,838	60,603	143,441	163,193	306,634	5,176	23,177	52,408	75,585	148,473	224,058	2,947				

¹ Not included among inward numbers, as they were not permitted to enter the United States.

² Deported aliens are included among the emigrant or the nonemigrant aliens.

TABLE 2.—LAST PERMANENT RESIDENCE OF IMMIGRANT ALIENS ADMITTED AND INTENDED FUTURE PERMANENT RESIDENCE OF EMIGRANT ALIENS DEPARTED, DURING SEPTEMBER, 1927, AND FROM JULY 1 TO SEPTEMBER 30, 1927, BY COUNTRIES

[Residence for a year or more is regarded as permanent residence]

Countries	Immigrant		Emigrant	
	Septem- ber, 1927	July to Septem- ber, 1927	Septem- ber, 1927	July to Septem- ber, 1927
Albania	29	98	13	30
Austria	104	271	34	176
Belgium	94	191	58	183
Bulgaria	23	64	12	40
Czechoslovakia	272	878	196	625
Danzig, Free City of	31	94		
Denmark	250	543	56	178
Estonia	17	82	2	3
Finland	54	135	32	197
France, including Corsica	408	1,057	135	802
Germany	3,321	8,202	334	1,781
Great Britain and Northern Ireland:				
England	780	1,997	591	2,156
Northern Ireland	23	52		1
Scotland	1,067	2,242	182	574
Wales	196	443	2	10
Greece	240	661	204	768
Hungary	79	247	81	242
Irish Free State	2,742	4,902	102	465
Italy, including Sicily and Sardinia	1,450	4,462	2,217	4,906
Latvia	18	57		11
Lithuania	36	138	28	150
Luxemburg	1	15	1	5
Netherlands	123	354	24	137
Norway	691	1,355	153	331
Poland	666	2,394	311	1,369
Portugal, including Azores, Cape Verde, and Madeira Islands	22	144	163	417
Rumania	132	337	104	291
Russia	127	372	33	113
Spain, including Canary and Balearic Islands	35	123	240	669
Sweden	703	1,675	62	318
Switzerland	183	456	63	242
Turkey in Europe	37	100	2	7
Yugoslavia	135	327	233	618
Other Europe	33	79	1	17
Total, Europe	14,122	34,547	5,729	17,832

TABLE 2.—LAST PERMANENT RESIDENCE OF IMMIGRANT ALIENS ADMITTED AND INTENDED FUTURE PERMANENT RESIDENCE OF EMIGRANT ALIENS DEPARTED DURING SEPTEMBER, 1927, AND FROM JULY 1 TO SEPTEMBER 30, 1927, BY COUNTRIES—Continued

[Residence for a year or more is regarded as permanent residence]

Countries	Immigrant		Emigrant	
	September, 1927	July to September, 1927	September, 1927	July to September, 1927
Armenia	1	6	2	5
China	268	515	454	1,245
India	21	39	21	42
Japan	68	182	111	286
Palestine	61	140	10	28
Persia	12	18	—	8
Syria	54	140	22	70
Turkey in Asia	11	22	3	31
Other Asia	31	85	5	19
Total, Asia	527	1,147	628	1,734
Canada	9,542	24,853	366	852
Newfoundland	328	637	51	185
Mexico	4,918	17,757	325	925
Cuba	483	1,230	160	466
Other West Indies	117	348	105	361
British Honduras	6	21	2	5
Other Central America	321	719	46	224
Brazil	83	269	—	12
Other South America	385	939	145	427
Other America	2	3	—	—
Total, America	16,185	46,775	1,200	3,457
Egypt	31	71	—	—
Other Africa	41	90	25	44
Australia	63	135	32	80
New Zealand	25	58	10	29
Other Pacific Islands	6	15	1	1
Total, others	166	369	68	154
Grand total, all countries	31,000	82,838	7,625	23,177

TABLE 3.—IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED DURING SEPTEMBER, 1927, AND FROM JULY 1 TO SEPTEMBER 30, 1927, BY RACE OR PEOPLE, SEX, AND AGE PERIODS

Race or people	Immigrant		Emigrant	
	September, 1927	July to September, 1927	September, 1927	July to September, 1927
African (black)	125	277	43	169
Armenian	83	302	4	14
Bohemian and Moravian (Czech)	137	303	80	355
Bulgarian, Serbian, and Montenegrin	85	167	153	447
Chinese	212	380	451	1,228
Croatian and Slovenian	75	205	80	194
Cuban	360	903	86	323
Dalmatian, Bosnian, and Herzegovinian	18	29	14	45
Dutch and Flemish	266	733	95	333
East Indian	12	19	9	18
English	4,414	11,230	880	2,944
Finnish	67	204	39	219
French	2,475	6,216	128	726
German	4,082	10,263	471	2,298
Greek	299	819	269	793
Hebrew	1,130	3,456	49	87
Irish	4,318	9,051	145	578
Italian (north)	220	663	290	699
Italian (south)	1,311	4,044	1,934	4,234
Japanese	73	177	107	265

TABLE 3.—IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED DURING SEPTEMBER, 1927, AND FROM JULY 1 TO SEPTEMBER 30, 1927, BY RACE OR PEOPLE, SEX, AND AGE PERIODS—Continued

Race or people	Immigrant		Emigrant	
	September, 1927	July to September, 1927	September, 1927	July to September, 1927
Korean	2	9	3	14
Lithuanian	37	84	32	166
Magyar	94	206	100	278
Mexican	4,707	17,419	311	879
Pacific Islander				1
Polish	260	939	288	1,359
Portuguese	24	199	168	433
Rumanian	32	97	79	248
Russian	118	341	53	190
Ruthenian (Russniak)	20	83	10	30
Scandinavian (Norwegians, Danes, and Swedes)	1,869	4,239	292	888
Scotch	2,700	6,373	304	839
Slovak	254	561	108	251
Spanish	158	426	335	852
Spanish American	432	1,190	122	521
Syrian	77	190	29	82
Turkish	50	71	9	49
Welsh	197	433	8	30
West Indian (except Cuban)	48	164	28	88
Other peoples	54	164	19	50
Total	31,000	82,838	7,625	23,177
Male	16,116	44,338	5,486	15,451
Female	14,884	38,450	2,139	7,726
Under 16 years	5,047	14,152	398	1,123
16 to 44 years	23,232	60,986	5,249	16,209
45 years and over	2,721	7,700	1,978	5,845

TABLE 4.—ALIENS ADMITTED DURING SEPTEMBER, 1927, AND FROM JULY 1 TO SEPTEMBER 30, 1927, SHOWING PRINCIPAL CLASSES UNDER THE IMMIGRATION ACT OF 1924, BY PRINCIPAL PLACES OF BIRTH, AS SPECIFIED

Place of birth	Aliens admitted					
	Quota immigrant		Nonimmigrant and nonquota immigrant		Total during September, 1927	Grand total, July 1 to September, 30, 1927
	September, 1927	July to September, 1927	September, 1927	July to September, 1927		
Europe	13,333	31,409	22,070	50,614	35,403	82,023
Asia	185	440	2,181	5,567	2,306	6,007
Africa	44	127	113	206	157	393
Australia and Pacific Islands	41	107	500	1,720	541	1,827
Canada, Mexico, and other America	61	169	18,091	53,022	18,152	53,191
Total	13,664	32,252	42,955	111,189	56,619	143,441

TABLE 5.—ALIENS ADMITTED DURING SEPTEMBER, 1927, AND FROM JULY 1 TO SEPTEMBER 30, 1927, BY CLASSES UNDER THE IMMIGRATION ACT OF 1924.

[The number of immigrants appearing in this table and in Table 4 is not comparable with the number of statistical immigrant aliens shown in the other tables, by ports of entry, race or people, etc.]

Class	Admitted to mail Septem- ber, 1927	July to Septem- ber, 1927
Nonimmigrants		
Government officials, their families, attendants, servants, and employees	709	1,952
Temporary visitors for business or pleasure	5,956	18,892
In continuous transit through the United States	2,281	7,414
To carry on trade under existing treaty	142	309
Total	9,148	28,627
Nonquota immigrants		
Wives and children of United States citizens	1,2,149	6,781
Returning residents	16,458	32,045
Natives of nonquota countries	1,14,234	41,825
Wives and children of natives of nonquota countries	1,84	278
Ministers of religious denominations and their wives and children	153	434
Professors of colleges, academies, seminaries, or universities, and their wives and children	84	118
Students	645	972
Veterans of the World War and their wives and children		101
Spanish subjects admitted to Porto Rico		7
Total	33,807	82,562
Quota immigrants (charged to quota)	13,664	32,252
Grand total admitted	56,619	143,441

¹ Wives, and unmarried children under 18 years of age, born in quota countries.

² Does not include aliens born in nonquota countries who were admitted under the act as Government officials, visitors, returning residents, etc.

Country of birth and place of last residence abroad	Number of aliens admitted to mail in September 30, 1927	Nonimmigrant aliens admitted to mail in September 30, 1927		Nonquota aliens admitted to mail in September 30, 1927		Total aliens admitted to mail in September 30, 1927
		of which were from Europe	of which were from Asia	of which were from Europe	of which were from Asia	
U.S.A.	110,466	97,022	4,045	5,131	1,14,234	143,441
U.S.S.R.	100,2	100,2	0	0	0	100,2
U.S.	100	100	0	0	0	100
U.S.A.	98,7,1	98,7,1	0	0	0	98,7,1
U.S.A.	250,52	200,52	50,52	0	0	250,52
U.S.A.	100,00	100,00	0	0	0	100,00

the publications retained in the following are those which have been issued by State bureaus or through the State departments of labor which have equivalent functions and are now available.

PUBLICATIONS RELATED TO LABOR

Official Bulletin Series

ACTIVITIES OF STATE LABOR BUREAUS

AMONG the labor activities of State bureaus the following, reported either directly by the bureaus themselves or through the medium of their printed reports, are noted in the present issue of the *Labor Review*:

California.—Report on changes in number of employees and amount of weekly pay roll in 792 industrial establishments, p. 158.

Illinois.—Report on changes in employment and earnings in factories in the State, p. 160.

Iowa.—Record of industrial accidents in 1925-26, p. 74; changes in volume of employment, p. 162.

Kansas.—Record of industrial accidents in 1926, p. 74.

Maryland.—Report on volume of employment, p. 163.

Massachusetts.—Changes in volume of employment in various industries, p. 163.

New Jersey.—Report on vocational rehabilitation work, 1925-26, p. 97; changes in volume of employment and pay roll in 847 establishments, p. 164.

New York.—Record of strikes, 1925-26 and 1926-27, p. 128; compensation for eye injuries, 1926-27, p. 86; double compensation awards to minors, 1926-27, p. 86; changes in number of employees and weekly pay rolls in about 1,600 factories, p. 166.

Oregon.—Statistics on child labor, 1925 and 1926, p. 114.

Pennsylvania.—Study of anthrax hazard, 1922-1926, p. 77; changes in employment and pay-roll totals, p. 168.

Wisconsin.—Volume of employment in Wisconsin industries, p. 169.

PUBLICATIONS RELATING TO LABOR

Official—United States

CALIFORNIA.—Industrial Welfare Commission. *What California has done to protect the women workers. Sacramento, 1927.* 27 pp.; charts.

Gives a résumé of the history of the industrial welfare commission, and of the situation in California as respects the minimum wage, with a summary of the wage rates now being enforced. A section relating to the collection of unpaid minimum wages for women and minors shows that in the two years ending June 30, 1924, the commission collected \$20,657, and in the next biennium \$15,809 on this account.

IOWA.—Bureau of Labor. *Report for the biennial period ending June 30, 1926. Des Moines, 1927.* 21 pp.

The report contains information on factory, elevator, and boiler inspection, child labor, employment, and industrial accidents. Data on the industrial accidents which occurred in Iowa from July 1, 1925, to June 30, 1926, are given on page 74 of this issue.

KANSAS.—Public Service Commission. Labor Department. *Annual report for the year ending December 31, 1926. Topeka, 1927.* 82 pp.

Data on industrial accidents, taken from this report, are given on page 74 of this issue.

MARYLAND.—Bureau of Mines. *Fourth annual report, calendar year 1926. Baltimore [1927].* 103 pp.; maps.

NEW YORK.—Department of Labor. *Annual report of the Industrial Commissioner for the 12 months ended June 30, 1927. Albany, 1927.* xv, 454 pages.

Presents detailed reports of the various divisions and bureaus of the department of labor, concluding with opinions of the attorney general construing provisions of the labor laws. The portions of the volume which deal with workmen's compensation, the State insurance fund, and the division of self-insurance are noted on page 86 of this issue. A brief summary of the section on strikes occurring in 1926-27 may be found on page 128.

OREGON.—Industrial Welfare Commission. *Seventh biennial report, from January 1, 1925, to December 31, 1926. Salem, 1927.* 18 pp.

Statistics on child labor, taken from this report, appear on page 114 of this issue.

UNITED STATES.—Department of Commerce. Bureau of Foreign and Domestic Commerce. *Statistical abstract of the United States, 1926. Washington, 1927.* xvi, 831 pp.

Includes data on immigration and emigration, prices and cost of living, wages, building permits, coal strikes, number of civil service employees, and civil service retirement.

— Bureau of Mines. *Bulletin 197: Sampling and examination of mine gases and natural gas. Washington, 1926.* vii, 108 pp.; diagrams, illustrations.

A revision of Bulletin 42, describing the methods and illustrating the equipment used in the sampling and examination of mine gases and natural gas at the gas laboratory of the Pittsburgh station of the United States Bureau of Mines.

Much of the material contained in the former bulletin has been reprinted, but laboratory methods have been brought up to date and descriptions are given of new types of apparatus which have superseded some of the designs described in Bulletin 42 that are now obsolete.

UNITED STATES.—Department of Commerce. Bureau of Mines. *Bulletin 282: Metal-mine accidents in the United States during the calendar year 1925*, by William W. Adams. Washington, 1927. vi, 120 pp.

Reviewed on page 68 of this issue.

— — — Technical paper 426: *Production of explosives in the United States during the calendar year 1926, with notes on mine accidents due to explosives*, by William W. Adams. Washington, 1927. 46 pp.; chart.

That portion of this report dealing with accidents due to explosives in coal mines, metal mines, and quarries is noted on page 71 of this issue.

— Bureau of Standards. *Handbook series, No. 10: Safety rules for the installation and maintenance of electrical supply and communication lines, comprising part 2 of the fourth edition, national electrical safety code*. Washington, 1927. xxiii, 322 pp.; map, charts.

— Department of Labor. Bureau of Labor Statistics. *Annual report of the Commissioner of Labor Statistics, fiscal year ended June 30, 1927*. Washington, 1927. 41 pp.

— — — Bulletin No. 441: *Productivity of labor in the glass industry*. Washington, 1927. iv, 204 pp., illustrations.

An advance summary of the most important data contained in this bulletin was published in the *Labor Review* for April, 1927 (pp. 1-13).

— — — Bulletin No. 445: *Retail prices, 1890 to 1926*. Washington, 1927. iv, 221 pp.; charts.

Contains the basic data on retail prices of food, coal, gas, and electricity in the United States from 1890 to the end of 1926, obtained in the latest investigation of retail prices by the Bureau of Labor Statistics. Current retail price figures bringing up to date the most important information given in this bulletin are published each month in the *Labor Review*.

— — — Bulletin No. 450: *Wages and hours of labor in the boot and shoe industry: 1907 to 1926*. Washington, 1927. iii, 97 pp.

An advance summary of the most important data contained in this bulletin was published in the *Labor Review* for March, 1927 (pp. 77-86).

— Women's Bureau. *Bulletin No. 62: Women's employment in vegetable canneries in Delaware*. Washington, 1927. v, 47 pp.

Based on an investigation made in the fall of 1924. Gives data as to hours, wages, and working conditions in the canneries, and the age, nativity, conjugal condition, etc., of the workers, with a discussion of the camps as to buildings, sanitation, water supply, and the like.

— Federal Board for Vocational Education. *Bulletin No. 121, civilian vocational rehabilitation series No. 14: Proceedings of the Fourth National Conference on Vocational Rehabilitation of the Disabled Civilian, Memphis, Tenn., March 28-31, 1927*. Washington, June, 1927. xiii, 144 pp.

Extracts from this report are published on page 95 of this issue.

Official—Foreign Countries

AUSTRALIA.—Department of Health. Division of Industrial Hygiene. Service publication No. 4: *An investigation of certain health aspects in persons engaged in the woodworking industries*, by D. G. Robertson, M. D. Melbourne, 1927. 36 pp.

Reviewed on page 81 of this issue.

AUSTRALIA (NEW SOUTH WALES).—Bureau of Statistics. *New South Wales statistical register for 1924-25*. Sydney, 1926. xiv, 791 pp.

The detailed statistical data for New South Wales presented in this volume include figures on employment, wages, and production in various industries, wholesale and retail prices and rents in Sydney, building permits, industrial arbitration, migration, naturalization, trade-unions, and friendly, cooperative, and building societies. The publication brings together the 13 sectional parts which had already been printed separately.

— [Industrial Commission.] *Determination of the standard of living and declaration of the living wage for adult male employees, December 15, 1926*. Sydney, 1927. 29 pp.

Text of the declaration of the basic wage with which was coupled the plan for child endowment proposed, and since adopted, in New South Wales. (See Labor Review, April, 1927, p. 102; November, 1927, p. 114.) Contains a discussion of what the standard of living, under Australian conditions, should imply, of the cost involved, and of the relation between a basic wage and the number of children in a family.

— (SOUTH AUSTRALIA).—[Statistical Office.] *Statistical register, 1925-26*. Adelaide, 1927. [Various paging.]

In addition to a mass of general statistical data for South Australia, the volume includes figures on production, prices, wages in various industries, migration, friendly societies, and accidents to passengers and employees on railways and tramways, for 1925-26 and previous years.

— (VICTORIA).—Department of Labor. *Report of the chief inspector of factories and shops for the year ended December 31, 1926*. Melbourne, 1927. 52 pp.

For the year, 10,624 factories, employing 135,510 workers, were registered, an increase over the preceding year of 450 factories and 7,497 employees. Increased interest in welfare work is reported, and, following the appointment of a woman as female medical inspector, special attention has been given to conditions under which women and children are working. The number of accidents reported, including 15 fatalities, was 1,252, an increase of 256 over the preceding year. The percentage of accidents to employees was 0.924, the highest rate recorded since the reporting of all factory accidents was made compulsory in 1920.

— Registrar of Friendly Societies. *Report for the year 1926*. Melbourne, 1927. 6 pp.

At the close of 1926 the total number of societies registered was 17, of which 14 were friendly societies and their branches and 3 were industrial and provident societies.

— (WESTERN AUSTRALIA).—[Court of Arbitration.] *Basic wage declaration for the year 1927-28 [under industrial arbitration act, 1912-1925] and reasons of the court*. Perth, 1927. 27 pp.

Summarized briefly on page 93 of this issue.

BELGIUM—Ministère de l'Intérieur et de l'Hygiène. *Population. Recensement général du 31 décembre, 1920. Tomes I, II, and III*. Brussels, 1925 and 1926. [Various paging.]

Volume I explains the method used in making the census, gives the laws, decrees, ministerial instructions, and various documents relating to the census, and an analysis of its results. Volume II gives population according to permanent residence, country of birth and nationality, language, civil status, education,

number of children, and duration of marriage. Volume III includes population statistics classified according to civil status and education, in relation to age. In this volume occupational figures are presented by districts and Provinces and for certain cities.

CANADA (BRITISH COLUMBIA).—Minister of Mines. *Annual report for the year ended December 31, 1926.* Victoria, 1927. 468 pp.; maps, diagrams, illustrations.

According to this publication, production in the mineral industry in British Columbia in 1926 outstripped all previous records, the production in metal mining for that year being valued at \$51,863,534, while the value of the coal output was \$11,650,180. Comparative data on per capita production in coal mines are given for the years 1915 to 1926, the output per employee in 1926 being 437 tons. Fatal accidents in and around coal mines numbered 10 in 1926 as against 6 in 1925.

CEYLON.—[Department of Statistics and Office Systems?] *Handbook of commercial and general information for Ceylon, compiled by L. J. B. Turner, director of statistics and office systems.* Colombo, 1927. xii, 300 pp.; maps, charts, illustrations.

A revision of the first handbook, published in 1922, bringing the data up to the end of 1926. The short section on labor includes some data on legislation, wages and hours, and immigration and emigration.

FEDERATED MALAY STATES.—Labor Department. *Annual report, for the year 1926.* Kuala Lumpur, 1927. 51 pp.

In seven parts: I, Indian immigration; II, Welfare of laborers, including number employed 1922 to 1926 and wages in four districts in 1925; III, Chinese labor; IV, Netherlands Indian labor; V, Local Malay labor; VI, Legislation; VII, Staff and administration. The attached appendixes include statistics on arrivals and departures in 1926; number of laborers, by nationality, employed on specified estates and in Government departments on January 1 and December 31, 1926; and fatal accidents to South Indians in 1926, by cause.

GERMANY.—[Reichswirtschaftsministerium.] Statistisches Reichsamt. *Statistisches Jahrbuch für das Deutsche Reich, 1927.* Berlin, 1927. [Various paging.] Charts.

Annual statistical handbook for Germany, covering 1926 and previous years with some data for 1927. It includes tables relating to prices, wages, employment, strikes and lockouts, collective agreements, and social insurance.

GREAT BRITAIN.—Industrial Fatigue Research Board. *Report No. 43: A study of telegraphists' cramp, by May Smith and others.* London, 1927. iv, 40 pp.; diagrams.

Reviewed on page 82 of this issue.

— Mines Department. Safety in Mines Research Board. *Paper No. 38: The ignition of gases by hot wires, by W. C. F. Shepherd and R. V. Wheeler.* London, 1927. 26 pp.; diagrams, illustrations.

This paper presents the results of a study undertaken to discover to what extent the glowing filament of a 2-volt miners' electric lamp-bulb might constitute a source of danger in a coal mine by reason of its possible ability to cause the ignition of mixtures of fire damp and air.

— Ministry of Transport. *Report upon the accidents that occurred on the railways of Great Britain during the year 1926.* London, 1927. 22 pp. (Cmd. 2941.)

Data from this report appear on page 75 of this issue.

INTERNATIONAL LABOR OFFICE.—*Studies and reports, series F (industrial hygiene), No. 11: White lead.* Geneva, 1927. 409, v pp.

This volume is a revision of an earlier report prepared by the International Labor Office when the question of the prohibition of white lead in painting was being considered by the 1921 session of the International Labor Conference. At

the beginning of 1927 the white lead convention had been ratified by 13 countries and ratification had been authorized in 3 other countries and recommended in 5. This report, therefore, aims to present an impartial survey of the facts in regard to the regulation of the use of white lead in the different countries. The report covers the nature of the white-lead hazard, the technical aspect of the problem with regard to satisfactory substitutes, the efficacy of restrictive regulations in the painting trades, and legislative remedies.

NETHERLANDS.—Departement van Arbeid, Handel en Nijverheid. *Centraal verslag der arbeidsinspectie in het Koninkrijk der Nederlanden over 1926. The Hague, 1927.* [Various paging.] Illustrations, diagrams.

Official report of the activities of the Netherlands factory-inspection service during the year 1926. It includes data on industrial accidents and accident prevention, occupational diseases, decisions of the courts in labor matters, working hours, education for woman factory workers, and labor conditions in the brick, fishing, peat-digging, and oak-peeling industries.

NEW ZEALAND.—Department of Labor. *Report [for the fiscal year April 1, 1926, to March 31, 1927]. Wellington, 1927.* 32 pp.

Some figures from this report, concerning wages in New Zealand, are given on page 142 of this issue.

— Pensions Department. *Twenty-ninth annual report, for the year ended March 31, 1927. Wellington, 1927.* 7 pp.

Reviewed on page 90 of this issue.

NORTHERN IRELAND.—Registrar of Friendly Societies. *Report for the year ended December 31, 1926. Part A: Industrial and provident societies; Part B: Friendly societies; Part C: Trade-unions; Part D: Building societies. [Belfast (?), 1927. Various paging.] Mimeographed.*

UNION OF SOUTH AFRICA.—Department of Mines and Industries. *Annual reports of the Secretary for Mines and Industries and the Government Mining Engineer for the calendar year ended December 31, 1926. Pretoria, 1927.* [Various paging.] Charts.

The volume includes sections relating to labor, wages, accidents, and output in the various mines of the Union, with a chapter on miners' phthisis.

Unofficial

AMERICAN PRISON ASSOCIATION. *Proceedings of the 56th annual congress, Pittsburgh, Pa., October 15 to 21, 1926. New York, 135 East Fifteenth Street [1927?]. 370 pp.*

Among the subjects taken up at this congress were prison industries, systems of prison labor, and employment for county jail prisoners.

ATZLER, EDGAR, Editor. *Körper und Arbeit: Handbuch der Arbeitsphysiologie. Leipzig, Georg Thieme, 1927.* xii, 770 pp.; diagrams, illustrations.

A comprehensive treatise on the physiology of labor in both its theoretical and practical aspects.

BARKER, J. ELLIS. *America's secret—the causes of her economic success. London, John Murray, 1927.* viii, 418 pp.

This book, by an English student, analyzes the causes of the present wealth and prosperity of the United States and concludes that "unless England Americanizes her methods, England and the British Empire will become an appendage to the United States."

CONSUMERS' LEAGUE OF OHIO. *Accidents to working children of Ohio. Cleveland, 308 Euclid Avenue, 1927.* 87 pp.; charts, illustrations.

Reviewed on page 114 of this issue.

DANA, RICHARD T. *The human machine in industry.* New York, Codex Book Co. (Inc.), 1927. xiv, 312 pp.; charts.

This volume seeks to bring together in convenient form data regarding the various factors affecting the health and efficiency of the industrial worker.

DINGLEY, S. *The peasant's movement in Indonesia.* Berlin, R. L. Prager [1927?]. 60 pp.

An account of conditions in Java, Sumatra, and the other islands making up Indonesia, with a discussion of the unrest of the peasants, and of their efforts to secure relief from what they consider exploitation and oppression.

DUNN, ROBERT W. *Company unions: Employers' "industrial democracy."* New York, Vanguard Press, 1927. xvi, 206 pp.

Written by an opponent of company unions. As described by the author, "the purpose of this book is to present the progressive trade-union slant on company unions and to outline their significance, purpose, and practices, as well as certain methods for meeting their advances. This is done chiefly by sketching certain specific company unions now in operation and showing how the workers fare under these plans."

HENDERSON, ARTHUR. *Trade-union law.* Oxford, Ruskin College, 1927. 39 pp.

This pamphlet forms No. 2 of the Ruskin College study courses. It gives a summary of the law relating to trade-unions as it was up to the year 1927, and as it has been affected by the trade disputes and trade-unions bill.

HEXTER, MAURICE BECK. *Juvenile employment and labor mobility in the business cycle.* Boston, Massachusetts Child Labor Committee, 1927. xix, 111 pp.; charts.

The Massachusetts law requires that certificates be issued to young workers before they may enter employment, the requirements varying according to the age of the applicant, his educational qualifications, and the kind of work he seeks. When he leaves employment, the certificate must within two days be filed with the authorities, and must be reissued before he may legally take another job. There are thus official records of the child's first employment and of his subsequent changes. Taking these as a basis, the author constructs for Boston an index of juvenile employment, and makes a suggestive study of the trend, the seasonal fluctuations, and cyclical variations of the juvenile labor market.

HULVERSON, GEORGE R. *Personnel.* New York, Ronald Press Co., 1927. xi, 400 pp.; charts.

Presents principles and methods which apply broadly to the administration of the personnel activities of a business. In addition to the successful selection of employees, it is highly important, the author holds, that the personnel department should develop a higher degree of skill in workers, assure their placement where they can give the best service, and provide incentives for them to do their best and working conditions favorable to the greatest productivity.

INFORMATION BUREAU ON WOMEN'S WORK. *Trend of women's wages: Ohio, 1925.* Toledo, Ohio, 305 Commerce Guardian Building [1927?]. 26 pp.; diagrams.

Reviewed on page 111 of this issue.

INTERCOLLEGIATE DEBATES. *A yearbook of college debating.* Vol. VIII. Edited by Egbert Ray Nichols. New York, Noble & Noble, 1927. [Various paging.]

Oxford University, the University of British Columbia, and various American colleges are represented in this volume of debates.

IRISH LABOR PARTY AND TRADE UNION CONGRESS. *Report of the national executive for the year 1926-27.* Dublin, Powell Press, 1927. 23 pp.

Some improvement in the industrial situation took place during the year, according to the report, and progress was made in uniting the workers in Dublin. The program of the Irish Labor Party is given, with a discussion of the attitude taken concerning legislation before the Dail during the past session.

LASKI, HAROLD J. *Communism*. London, Williams & Norgate (Ltd.), 1927. 256 pp. (Home university library of modern knowledge, vol. 131.)

An opponent of communism attempts to explain and analyze the major communist theses. The author concludes that "the answer to the new faith is not the persecution of those who worship in its sanctuary, but the proof that those who do not share its convictions can scan an horizon not less splendid in the prospect it envisions nor less compelling in the allegiance it invokes."

LEAGUE FOR INDUSTRIAL RIGHTS. *Building trades strikes against open shop products are unlawful*. New York, 185 Broadway, 1927. 31 pp.

MAYS, ARTHUR B. *The problem of industrial education*. New York, Century Co., 1927. xii, 418 pp.

A survey of the field of industrial education, which is designed to meet the needs of students and educators in general. The volume is divided into four parts in which are taken up the background of the problem, modern phases of the problem, the training of female industrial workers, and administrative policies, problems, and practices.

The author considers that an adequate program of industrial education must be national in scope and developed through an intelligent and comprehensive application of principles drawn from all the social sciences.

METROPOLITAN LIFE INSURANCE CO. Policyholders' Service Bureau. *Training key men in industry*. New York [1927?]. 19 pp.

A discussion of the advantages, cost, methods of conducting, and requirements of successful foreman-training courses, with brief accounts of what has been done along this line by different companies.

MINE INSPECTORS' INSTITUTE OF AMERICA. *Proceedings, Charleston, W. Va., May, 1927*. [Pittsburgh?] 1927. 129 pp., illus.

Contains the minutes of the eighteenth annual meeting of the institute, held at Charleston, W. Va., May 3-5, 1927.

MOORE, HARRY H. *American medicine and the people's health. With an introduction by the committee of five of the Washington conference on the economic factors affecting the organization of medicine*. New York, D. Appleton & Co., 1927. xxii, 647 pp.; map, charts, illustrations.

Economic and social changes and the increase in the general extent of scientific knowledge have brought about a change in the attitude of the public toward the general field of medicine. There is a quite general feeling that the prevention and cure of disease should be more effectively safeguarded than is the case at the present time. The problem, as stated to the American Medical Association at its annual meeting in 1924, is "that involved in the delivery of adequate scientific medical service to all the people, rich and poor, at a cost which can be reasonably met by them in their respective stations." The present volume contains a large amount of data relative to the organization of medicine, the cost of medical service, the lack of interest among private practitioners in preventive medicine, and the inadequacy of the present organization to meet the situation. The book is divided into four parts, dealing with the evolution of medicine; manifestations of the maladjustment in medicine; recent attempts to remedy the maladjustment, including medical service in industry, other organized medical services, and health insurance; and the probable future of organized medicine. There are numerous appendixes covering different phases of the problem.

MUIR, RAMSAY. *America the golden*. London, Williams & Norgate (Ltd.), 1927. x, 141 pp.

The impressions of an English economist of industrial and labor conditions in America, with comparisons of English conditions. The writer finds four things "to stand forth preeminently in the America of to-day": (1) The systematic

endeavor to bring about a wider and more healthy distribution of ownership; (2) the general disposition to use scientific methods, to spend freely upon research, and to regard management as a highly exacting and responsible profession; (3) the widespread readiness to try experiments in new forms of industrial organization; and (4) the development of a new policy of cooperation with the employer in some of the more progressive trade-unions.

NATIONAL CONFERENCE OF LABOR WOMEN. *Report of the eighth conference held at Huddersfield [England], May 11 and 12, 1927. London, Labor Party, 1927. 83 pp.*

A marked increase in membership was reported, the number of women's sections in April, 1927, being 1,728, with an estimated membership of nearly 300,000. Resolutions were passed denouncing the trade disputes and trade-unions bill, calling for the passage of the new factory legislation which has been promised, for the admission of women to the franchise on the same terms as men, and indorsing the main features of the Labor Party's program.

NATIONAL CONFERENCE OF SOCIAL WORK. *Proceedings at the fifty-fourth annual session, held in Des Moines, Iowa, May 11-18, 1927. Chicago, University of Chicago Press, 1927. vi, 738 pp.*

Under the head "Industrial and economic problems," the following papers were presented at the conference: The church, public opinion, and industry; Migratory children; The social result of legislation affecting woman workers; The effect of labor laws on woman workers; and Relation of the curative workshop to the rehabilitation of disabled persons. Other papers covered civilian rehabilitation, social consequences of the immigration law, immigration and the immigrant, and many other subjects of special interest in connection with social work.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *Wages in the United States, 1914-1926. New York, 247 Park Avenue, 1927. xi, 159 pp.; charts.*

This volume presents data regarding wages in manufacturing industries, public utilities, building trades, agriculture, and on Class I railroads. The data on manufacturing industries are based on original reports of the National Industrial Conference Board from approximately 1,700 plants in 25 basic industries, employing (in 1924) 743,227 workers.

NATIONAL METAL TRADES ASSOCIATION (CINCINNATI BRANCH). *Apprenticeship plan of the metal trades industries. Cincinnati, Ohio, 1926. 16 pp.*

An outline, based upon the association's manual concerning apprenticeship in the metal trades, designed to secure a uniform course of training which shall give a minimum of specific requirements, while permitting sufficient flexibility to meet the diversified needs of shops throughout the country.

NATIONAL SAFETY COUNCIL. *Accident facts, 1927. Chicago, 108 E. Ohio St., 1927. vi, 40 pp.; charts.*

A compilation of accident statistics for 1926 in tabular and graphic form, derived from such sources as State motor-vehicle bureaus, the United States Bureau of the Census, the Interstate Commerce Commission, insurance companies, city and State health departments, and from reports sent directly to the safety council. The major portion of the pamphlet is given over to public accidents caused mostly by motor vehicles. Two pages are devoted to accidents in the home. The report was not designed to cover industrial accidents, although there is a very brief discussion of the subject.

NORTHERN STATES' COOPERATIVE LEAGUE. *Third year book, 1927. Minneapolis, 1927. 189 pp.*

Contains much valuable information relative to the consumers' cooperative movement in the North Central States. Data from this report are given on pages 101, 103, and 104.

PEIXOTTO, JESSICA B. *Getting and spending at the professional standard of living.* New York, Macmillan Co., 1927. xxii, 307 pp.

This book presents the results of a study made in December, 1922, to determine the cost of living an academic life. The incomes and expenditures of 96 married faculty members of the University of California were analyzed, the subjects of the study including professors (29 per cent), associate professors (27 per cent), assistant professors (23 per cent), instructors (12 per cent), and associates (8 per cent).

POST, LOUIS F. *The basic facts of economics: A common-sense primer for advanced students.* Washington, 2513 Twelfth Street NW., 1927. vii, 100 pp.

POTWIN, MARJORIE A. *Cotton-mill people of the Piedmont: A study in social change.* New York, Columbia University Press, 1927. 166 pp.; map. (Columbia University studies in history, economics, and public law, No. 291.)

A sociological study of a southern mill community. The author has been community director of certain large cotton mills in the Piedmont section.

ROBERTI-LAGARDE, HENRIETTE. *La réparation des maladies professionnelles, étude théorique et critique.* Paris, L. Chauny et L. Quinsac, 1927. 332 pp.

A critical study of the French law of October 25, 1919, on occupational diseases, in the light of the six years' experience since the law went into effect. The law provides for compensation for lead and mercury poisoning only, and the author discusses the list of diseases which she considers should be made compensable and the reasons why the law should be made sufficiently comprehensive to include all diseases which are caused by the occupation.

SNOWDEN, PHILIP. *The way to industrial peace.* London, The Brotherhood Movement (Inc.), 1927. 40 pp. (The John Clifford lecture for 1927.)

A discussion centering around the thesis that the essence of the industrial problem is to realize that business is a collective enterprise in which capital and labor are essential factors, that there should be no division between them, and that there should be equality of status, though not of function, among all necessarily engaged in the common enterprise of carrying on an industry. The old mental attitudes of employers and workers are regarded as the chief obstacles to securing industrial peace, and various steps toward establishing a better condition are discussed.

STEINER, JESSE F., AND BROWN, ROY M. *The North Carolina chain gang: A study of county convict road work.* Chapel Hill, University of North Carolina Press, 1927. x, 194 pp.; map, illustrations.

WORKERS' HEALTH BUREAU OF AMERICA. *First National Labor Health Conference, Cleveland, Ohio, June 18-19, 1927. [Report of proceedings.]* New York, 799 Broadway, 1927. 152 pp.

An account of this conference was given in the September, 1927, issue of the *Labor Review* (p. 61).

U. S. DEPARTMENT OF LABOR

JAMES J. DAVIS, Secretary

BUREAU OF LABOR STATISTICS

ETHELBERT STEWART, Commissioner

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- *No. 133. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements. [1913.]
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- No. 233. Operation of the industrial disputes investigation act of Canada. [1918.]
- No. 255. Joint industrial councils in Great Britain. [1919.]
- No. 283. History of the Shipbuilding Labor Adjustment Board, 1917 to 1919.
- No. 287. National War Labor Board: History of its formation, activities, etc. [1921.]
- No. 303. Use of Federal power in settlement of railway labor disputes. [1922.]
- No. 341. Trade agreement in the silk-ribbon industry of New York City. [1923.]
- No. 402. Collective bargaining by actors. [1926.]
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- No. 313. Consumers' cooperative societies in the United States in 1920.
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- *No. 109. Statistics of unemployment and the work of employment offices in the United States. [1913.]
- No. 172. Unemployment in New York City, N. Y. [1915.]
- *No. 183. Regularity of employment in the women's ready-to-wear garment industries. [1915.]
- *No. 195. Unemployment in the United States. [1916.]
- No. 196. Proceedings of the Employment Managers' Conference held at Minneapolis, Minn., January 19 and 20, 1916.
- *No. 202. Proceedings of the conference of Employment Managers' Association, of Boston, Mass., held May 10, 1916.
- No. 206. The British system of labor exchanges. [1916.]
- *No. 227. Proceedings of the Employment Managers' Conference, Philadelphia, Pa., April 2 and 3, 1917.
- No. 235. Employment system of the Lake Carriers' Association. [1918.]
- *No. 241. Public employment offices in the United States. [1918.]
- No. 247. Proceedings of Employment Managers' Conference, Rochester, N. Y., May 9-11, 1918.
- No. 310. Industrial unemployment: A statistical study of its extent and causes. [1922.]
- No. 409. Unemployment in Columbus, Ohio, 1921 to 1925.

Foreign Labor Laws.

- *No. 142. Administration of labor laws and factory inspection in certain European countries. [1914.]

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- No. 263. Housing by employers in the United States. [1920.]
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- No. 368. Building permits in the principal cities of the United States in [1921 to] 1923.
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- *No. 104. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories. [1912.]
- No. 120. Hygiene of the painters' trade. [1913.]
- *No. 127. Dangers to workers from dusts and fumes, and methods of protection. [1913.]
- *No. 141. Lead poisoning in the smelting and refining of lead. [1914.]
- *No. 157. Industrial accident statistics. [1915.]
- *No. 165. Lead poisoning in the manufacture of storage batteries. [1914.]
- *No. 179. Industrial poisons used in the rubber industry. [1915.]
- No. 188. Report of British departmental committee on the danger in the use of lead in the painting of buildings. [1916.]
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- No. 212. Proceedings of the conference on social insurance called by the International Association of Industrial Accident Boards and Commissions, Washington, D. C., December 5-9, 1916.
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Miscellaneous Series.

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